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ABSTRACT

The document contains papers presented at a conference on global population trends. Conference participants, who represented international agencies and governments in developing nations, investigated social determinants of population trends, population policy, and population program assistance. Eleven papers are presented. Topics discussed include status of population development, sociopolitical implications of family planning, population agency activities, social research and population policy, medical developments in the field of contraception, collection and analysis of demographic data, and population education programs. A summary of conference proceedings indicates that population problems are (1) closely related to each nation's development process, (2) more complex than is generally understood, (3) best understood by scholars in countries where problems are most severe, and (4) in need of more social research. (DB)

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THIRD

BELLAGIO CONFERENCE ON POPULATION

May 10-12, 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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WORKING PAPERS

THE ROCKEFELLER FOUNDATION

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INTRODUCTION

In May of 1973 The Rockefeller Foundation convened a meeting at the Foundation's Study and Conference Center in Bellagio, Italy, to consider the problem of the world's population growth. The present volume is the record of that conference representing some of the position papers prepared for it and a small portion of the attending discussion. As the list of the participants indicates, those in attendance were largely from international public or private agencies that have made population one of their principal concerns, together with regional representatives of the developing world—one from Southeast Asia, one from Latin America, and one from Africa.

This is not, however, a topic in which donors can be separated from recipients or developed from developing countries. There is but one future for the globe, and the past decade has only underscored our growing interdependence. Improved mutual awareness of the complexity of the problems we face is a *sine qua non* of effective progress.

Although each of them has been somewhat revised for purposes of publication, the original papers were not prepared with the thought of publication in mind. No claim is made that they are the final definitive word on the subject. In a certain sense this volume represents an "in house memorandum" and its chapters served as a basis for discussion; the conference was but a step to promote a dialogue between concerned planners interested in developing a common view of the population question. This was the third such conference on the topic of population growth to be held in the Bellagio Study and Conference Center since early 1970, and was quickly dubbed Bellagio III, a term which will be found in many of the papers and much of the discussion.

There is no need in these introductory remarks to attempt to convey the message or the flavor of this volume. Certainly there is no need to review or encapsulate the various contributions; each reader is perfectly able to do this for himself or herself.

It would be appropriate, however, to express the Foundation's appreciation to all the participants whether they prepared position papers or not. Improved mutual awareness of the problems is not a solution in and of itself, but is a prerequisite to reaching such a solution. It is hoped this volume will contribute to such an awareness.

Allan C. Barnes, M.D.
Vice-President
The Rockefeller Foundation

STATUS REPORT ON POPULATION DEVELOPMENTS

Bernard Berelson

Important recent developments in the population field, to be reviewed and discussed by the Bellagio III community, cover a substantial amount of material. Thus, I have tried to compress my text, and have made additional documentation available in an appendix.[1] In view of the purpose of this paper, which is to open the Bellagio III meeting with an overview of the situation since Bellagio II in 1971, I have not limited myself to the "hard facts" but have also included observations and judgments based on close experience with the field. This report consists of four sections:

1. Developments in the demographic situation
2. Developments in population policy
3. Developments in scientific and professional resources
4. Developments in the programmatic effort

Where do we stand, that is with regard to population conditions, the formation of governmental policy, the bases in knowledge and knowledgeable people, and the attempt to affect the demographic future?

Developments in the Demographic Situation

What is the current status with regard to population trends and their social determinants?

Fertility

For a large part of the developing world, the data are too few or too dubious to support even a moderately firm conclusion about the presence, the direction, or the size of a trend in fertility. For the majority of countries, there is no strong evidence either way; there are estimates of small decreases in crude birthrates, but they tend to be unreliable. However, for some countries in the developing world, strong declines in crude birthrates are reasonably well-documented for the 1960's (here in number of annual births per thousand population are the declines attributed to the past decade):

Africa		Asia		Latin America	
Mauritius	10–14	Hong Kong	15+	Trinidad and Tobago	15+
Egypt	5–9	Singapore	15+	Costa Rica	10–14
Tunisia	5–9	Taiwan	10–14	Barbados	10–14
		South Korea	10–14	Cuba	5–9
		Sri Lanka	5–9	Jamaica	5–9
		West Malaysia	5–9	Chile	5–9
				Puerto Rico	5–9

Moreover, there are a number of countries, some quite large, with *reported* declines of 2 to 4 points. Especially if one includes China, where there may have been a downward trend, the 1960's *may* have marked the beginning of a worldwide pattern of fertility decline in the sense that several countries in all three continents experienced substantial declines in crude birthrates (though not in sub-Saharan Africa). Where they did occur, the declines in crude birthrates are differentially attributable to changing age structure, changing marital patterns, and changing marital fertility.

First returns from the 1970 census round produced population counts higher than anticipated or estimated in a few countries (e.g., Kenya and Syria), but lower than expected (though still quite high) in a much larger number (e.g., Ghana, India, Indonesia, the Philippines, South Korea, Thailand, Brazil, Chile, and Mexico). The proper interpretation of the disparity is not altogether clear—were the estimates themselves "too high"? Were birthrates actually declining beyond expectations? Was mortality higher than recognized? Were the results perhaps an artifact of the census operation itself? At this stage we cannot be sure, and only careful analysis of final and more detailed results, country by country, will reveal the true situation. In the major case of India, however, the 1 percent sample shows fewer children aged 0 to 4 than 5 to 9 by about 2 or 3 percent, and if that is sustained in subsequent analyses, it would be an important finding.

As for the developed countries, the outstanding fertility event of the 1960's was the narrowing of differences among regions and countries of the industrialized world, mainly by the further decline in the birthrates of the non-European countries (United States, Australia, and Canada). In Northern and Western Europe, changes in fertility were small, though on balance downward; but in the socialist nations of Eastern Europe, fertility tended to decline to a point where it became an object of governmental concern and action.

Mortality

Despite some convergence in recent decades, there is still a marked difference between the developed and the developing worlds in crude death rate and life expectancy at birth. The developing countries have been catching up—an extension in life expectancy since the end of World War II of about 5 to 8 years in the developed countries, 10 to 15 in the developing—but they are still not yet anywhere near equality.

In the developed world, there is a remarkable uniformity in life expectancy: only two or three countries have not achieved the level of 70 years, and even their estimates are only a year or so below that. But differentials are wide in the developing world, from a 35-to-40-year expectancy in many parts of Africa to 60 for Latin America and as high as 65 or more in parts of East Asia. Still, lowered mortality and increased life expectancy are being realized in the absence of major economic development, at least to moderate levels.

Migration

With regard to internal migration, there are two central facts: (1) A substantial majority of the world's population, just over 60 percent, still live in rural areas. And of all people living in rural areas in the world, just over 80 percent are found in the developing countries. It is thus still true to say that about half of the people in the world live off relatively poor farming, as "peasants." (2) The virtually universal trend around the world is toward ever higher levels of urbanization. (In a recent comparative study, only two political units showed declines in the urban percentage—Andorra and American Samoa!)

Migration out of the countryside into cities and towns will presumably come to an end only when the great majorities of all countries have moved from rural to urban places. Urbanization is most advanced in the most highly industrialized areas—Australia, New Zealand, North America, Europe, and the Soviet Union, where the percentages vary between 60 percent and 85 percent. The urban percentage is just over 50 percent in Latin America, about 20 to 25 percent in Africa and Asia, and under 10 percent in Oceania. Everywhere urban populations grow at substantially higher rates of increase than total population, and this despite growing concern about persistent high levels of unemployment in the urban areas of developing countries and about environmental deterioration and "quality of life" in developed countries. Efforts to decrease the flow in many places have been relatively unsuccessful. (Note the recent imposition of a "citizen's tax" in Seoul, in an attempt to discourage in-migration and encourage out-migration.) Finally, rural-to-urban migration will not in itself have great influence upon the fertility levels of most countries, even if the in-migrants quickly adopt the low-fertility behavior of the urban residents. In a country where the rural-urban differential is quite high and the proportion migrating substantial, the effect upon the national fertility rate is likely to be in the 5-to-10 percent range at most.

International migration continues to be relatively limited. In several developing countries, pressure has been building to expel minority groups of one kind or another in order to achieve a more homogeneous national population. Virtually all countries exercise strict controls over international immigration, and with a few special exceptions like Israel and Australia, the numbers are kept small. The major current exception is the growing use of temporary international labor migration, particularly in Northern and Central Europe, with workers coming from the Mediterranean basin. This movement is of considerable economic importance at both the sending and the receiving ends: repatriation of earnings on one side; the extra supply of low-skilled workers on the other. But there are problems too: the repatriation of the unemployed and hence the economic power of the receiving over the sending country; social and cultural problems of assimilation in the new place of residence.

Recent Projections

The major new series focuses on the illustrative rather than the predictive power of projections—that is, illustrating the sizes of future populations as a result of their growth potential and assumed fertility alternatives. For some 90 units, from the world as a whole down to about 60 individual countries, this analysis shows what is ahead depending upon when a net reproduction rate of 1 is realized. And since that point is unlikely to be reached soon for a very large part of the world, the numbers ahead are substantial indeed—say, between 7 and 13 billion by mid-century—and themselves need coping with. If, for example, the developing world were to repeat the Western experience, the figure would be the latter one, nearly 90 percent in what are now developing countries.[2]

Presumed Determinants

What is happening with regard to those large elements outside the demographic system that have major effects upon population trends? Since a few years is too brief an interval for our instruments of measurement to analyze the great trends being monitored, we have sought some indication of broad patterns of movement in nine key areas of human concern that are relevant to our topic: environmental quality, health, food and nutrition, housing, education and literacy, employment, wages and income, social security, distributional equality, status of women. To this end we have abstracted, from three editions of the United Nations' *Report on the World Social Situation*, the then-current assessments in 1952, 1963, and 1970 (see table 1).

Despite the obvious limitations of the exercise, a broad picture of reasonable adequacy emerges: remarkable progress in health, a change from "marked deterioration" to "gradual improvement" in food and nutrition, steady though qualified progress in education and literacy, and, at least for the developing world, limited or no progress in the other areas. On the basis of this summary, it may be reasonable to conclude that progress in these matters is unlikely to be sufficient in itself to reduce population growth substantially over the next decade.

Developments in Population Policy

What is the current policy response to the demographic situation?

The Developing World

In the past few years, there has been a steady state on the policy front, perhaps a slight increase in favoring policies (see table 2). A few more countries officially seek to reduce population growth rates or support family planning activities for other than demographic reasons. In the past few years, some developing countries have moved up the scale from the support of family planning to an explicit policy to reduce the growth rate (e.g., the Philippines and Thailand), and rather more have moved up from no policy to support of family planning (e.g., Haiti, Afghanistan, Mexico, and Dahomey).

A current study[3] analyzes the population content of national plans from 70 developing countries. Only 27 of the countries recognized population problems in their development plans: 12 of the 21 Asian countries, 8 of the 26 African, and 7 of the 23 Latin American. The problems underlying that recognition were these: economic growth reduced by population growth (19), high rate of population growth in and of itself (18), unemployment (18), increasing school-age population (16), high dependency ratio (16), population pressure on health services (15), population pressure on social services (12), population pressure on housing (12), population pressure on agricultural system (5), decrease in individual standard of living (4), and population density (3). Of the 27 countries, 18 present policies and programs to reduce rates of population growth as part of the plan.

Still, a policy is not a program. All observers of the international population scene know that some official policies are pursued with commitment and energy, some are not. Here is a rough estimate of where that matter stands, based partly on objective criteria and partly on informed judgment (and although there might be differences in placing a particular country, the general picture would presumably remain).

As can be seen readily, there are few countries that are high on either measure, let alone on both, and there is naturally a strong

Table 1

Summary Assessments of Progress in Nine Major Areas of Social Concern (Presumed Fertility Determinants), for the World: 1952, 1963, and 1970

(Assessments basically use language of United Nations source documents, unless otherwise specified)

Major Area	1952 [a]	1963 [b]	1970 [c]
Environmental quality	Not discussed	No assessment made; renewed interest noted	No assessment made; increasing recognition noted
Health	Substantial progress	Outstanding progress	General improvement, no spectacular progress
Food and nutrition	Marked deterioration	Very little progress	Gradual improvement
Housing	Deterioration	Unsatisfactory	In developing regions, sharp decline; elsewhere, stable or improved
Education and literacy	Some notable advances	Significant progress	Some progress [d]
Employment, wages, and income	Uneven	Unsatisfactory	In developed regions, impressive; elsewhere, improvements merely nominal
Social security	Not discussed	In developing regions, limited progress; elsewhere, continued expansion	In developing regions, no striking improvements; elsewhere, continued expansion
Distributional equality			
International	Gap widened	Gap widened	Disparity persisted and even grew
National	In developing regions, no substantial improvement; elsewhere, a certain leveling	No noticeable improvement	No progress [d]
Status of women	No assessment made; issue discussed under employment	Some improvements in education [d]	Improvements in education

a. Refers primarily to developments in the period 1935–1950.

b. Refers primarily to developments in the period 1950–1960.

c. Refers primarily to developments in the period 1965–1970.

d. Language of summary assessment not in United Nations source document.

SOURCE: Assessments abstracted and summarized by Population Council staff from the 1952, the 1963, and the 1970 *Report on the World Social Situation*, prepared by the United Nations Secretariat in association with the United Nations Specialized Agencies. For detailed abstracts, see appendix.

Table 2

Number of Developing Countries and Aggregate Population Grouped According to Country Position on Population Growth and Family Planning Activities, by Major World Region, 1969–1972

Region and Year	Number of Countries			Percent Distribution of Population		
	Official Policy to Reduce the Population Growth Rate	Official Support of Family Planning Activities	Neither Policy nor Support	Official Policy to Reduce the Population Growth Rate	Official Support of Family Planning Activities	Neither Policy nor Support
Africa						
1969	6	4	32	21	21	58
1970	6	5	31	21	22	57
1971	7	7	29	21	22	57
1972	6	9	31	22	36	42
Asia						
1969	12	3	22	86	5	9
1970	14	1	22	92	0	8
1971	13	2	22	90	1	9
1972	15[a]	4	20	91	3	6
Latin America						
1969	3	12	8	3	28	69
1970	5	11	7	4	29	67
1971	5	13	6	4	33	63
1972	6	12	6	12	24	64
Total						
1969	21	19	62	67	10	23
1970	25	17	60	73	6	21
1971	25	22	57	75	6	19
1972	27	25	57	73	10	17

a. Bangladesh and Pakistan are two countries in 1972.

relationship between the two.

In this policy context, a certain "backlash" seems to be emerging with regard to "population control," and it would not surprise some close observers if that becomes a future major issue in the field. There have been a number of signals in the last few years: at the Latin American regional meeting of the IUSSP held in Mexico City in 1970; at the Accra Conference, jointly sponsored by the IUSSP and UN/ECA in December, 1971; at the International Workshop on Population Action Programmes in Manila in November, 1972; at the Second Asian Population Conference (ECAFE) in Tokyo in the summer of 1972; in the statement issued by 14 young scientists brought together under the auspices of UNESCO in the spring of 1972 to discuss "population and the environmental crisis." The offered explanations are several: "overselling" of population as a panacea for social ills, overstress on family planning as against MCH and public health, perceived funding disparities between population and other fields, the spurious effort "to buy development cheaply," the escape of the rich countries both politically and economically, skepticism that population is "that important," the socialist countries' response to the capitalist countries' proposals, the belief in social-economic development as the cure of "too high" fertility—all the way to the inevitable decline of any strong international trend or the inevitable counteraction to a sustained period of energetic and successful action. But whatever the cause or whatever its justification, the fact is present and perhaps growing.

The Developed World

A volume will be published later this year on the formulation of population policy in about 25 countries of the developed world, including all with 20 million population or more.[4] Here are a few preliminary observations from the summary overview:

> Almost all the countries have become explicitly concerned with the "population problem" in recent years, as indicated by the appointment of official population study groups. However, population does not rank high on the agenda of national problems, and it seems unlikely that the issue will gain enough priority in these countries over the next years to produce a full consistent position based primarily on demographic consideration. . . .

Table 3
Strength of Population Programs: 1972

Execution	Commitment: High	Medium	Low
High	Fiji Mauritius Singapore South Korea Taiwan	Hong Kong Thailand	
Medium	India Iran Philippines	Chile Colombia Costa Rica Dominican Republic Egypt Indonesia Jamaica Malaysia Panama Sri Lanka Trinidad Tunisia	El Salvador
Low		Bangladesh Ghana Mexico Pakistan	Ecuador Guatemala Honduras Kenya Morocco Nepal Paraguay Turkey Venezuela

The major issues and their treatment appear to be quite similar across countries of different politico-economic organization—roughly speaking, capitalist and socialist. That is, the demographic causes and consequences—urban growth, environmental pressures, fertility control, female employment, family assistance, etc.—do not seem markedly different across political systems. . . .

In all the effort to affect demographic growth, probably the two most effective measures, certainly in the short-term, have been the manipulation of immigration and of legalized abortion—with major effects in both directions. Among the measures to affect population distribution, none has worked very well in countering the movement to the metropolitan centers that characterizes all these countries. . . .

Among this group of countries there is more concern over too little growth of population than too much: too little in Japan, Israel, Greece, Poland, France, Bulgaria, Argentina, Czechoslovakia, Hungary, Romania, and Australia (now perhaps shifting). Unlike the current developing world, which is of course in a quite different demographic position, the political interest is to sustain population growth more than to limit growth—but at a low level. Countries are not at ease with "too low" a growth rate. . . .

Although there is still not much explicit population policy in these countries, the goal of population replacement as a standard component of the modernized, secularized country is dimly visible and perhaps emerging: up to replacement in a few countries, down to replacement in others. An NRR of 1 may become a feature of the developed world over the next few decades, as recommended as national policy first in Japan and supported by the recent commission in the United States. . . .

What will be the population issues over the next years in these countries? It is of course difficult to say with any assurance, but the following seem likely to be both influential and contentious over the next years: abortion, ethnic differentials in fertility, mortality, and migration, the environmental impact of population trends, urban problems, "too low" fertility more than "too high."

Developments in Scientific and Professional Resources

What are the recent developments with regard to knowledgeable institutions and people, on the one hand, and scientific knowledge on population matters, on the other? (Here I will be particularly brief since these matters will be addressed in the fourth session of this conference.)

Institutional and Personnel Development

There has been increasing support of such programs, but they will continue to require external assistance for some years in order to reach independent maturity, as defined by the availability of fully trained local staff, competent research and training programs, and local support. In the past few years, about 10 to 12 new institutional programs have been established, and 5 to 6 programs significantly expanded. Moreover, several international networks for population research have been developed, or are now in process. With such efforts, and with a larger number of agencies in the field, both funding agencies and operating agencies, the problems of duplication and overlap have also increased.

Institutional development has broadened out from the purely demographic/social science to include human reproduction, but such institutions are not yet comparable to schools of health for family planning purposes. There are some current efforts to develop multi-disciplinary programs involving the medical and the social sciences; these are typically of a regional character (e.g., Thailand and Ghana, and planned in Kenya, Colombia, and South Korea). As the field develops, the relative priorities seem to move from the region to countries and subregions (e.g., Francophone Africa and some of the larger countries in Asia and Latin America).

Developments in Scientific Knowledge

This is simply an attempt to signal some of the more important developments on the scientific front that can be identified for this short period.

Population/Economics

There appears to be a requestioning of our received wisdom on the impact of population growth on economic development, with perhaps more limited acceptance of the earlier conclusions. The economic profession is probably paying more attention to population issues, with particular interest in the following fields: (1) the microeconomic analysis of population processes, and especially the relationship between economic status and fertility behavior within the family; (2) demographic impacts on the employment situation; (3) population and development planning (the Population Council has prepared a manual, to be published in late 1973, on how planning offices can take demographic factors into account); (4) income distribution and its relationship to fertility trends; and (5) in some developed countries, the economics of a stationary population.

"Systems Analysis"

In the past few years, there has been much interest in the "systems analysis" of population matters. The efforts take a variety of forms and incorporate a variety of objectives, methods, scales, and levels of applicability (for illustration, see appendix). A review of the field is now in process. As a special case, it should

probably be noted that the well-known *Limits to Growth* of the Club of Rome did not get a very favorable reception from the demographic community, which at best thought it an interesting suggestion of what might be done and at worst thought it should either be ignored or denounced. In any case, its demographic content is minor: as one reviewer has put it, "*Limits to Growth* emerges from under its computer print-out and dynamic modeling as a new formalization of the basic Malthusian model."

Education

The Chau and Jones studies analyze demographic impacts on educational attainment in Colombia, Ceylon, Tanzania, Tunisia, Thailand, and a hypothetical developing nation.[5] In those settings, they show the effect of fertility trends in raising the cost of attaining educational goals and/or lengthening the time before the goals can be reached; and they analyze the trade-offs between increased enrollments and various aspects of educational quality.

Resources/Environment

Perhaps the major recent study was the analysis by Resources for the Future of the implications ahead for resource adequacy and environmental quality of the three-child American family as against the two-child family. That study, published by the U.S. Commission on Population and the American Future concluded:

> If because of personal preferences, we choose to have more rather than less children per family . . . we commit ourselves to a particular package of problems: more rapid depletion of domestic and international resources, greater pressures on the environment, more dependence on continued rapid technological development to solve these problems, fewer social options and perhaps the continued postponement of the resolution of other social problems. . . . If we choose to have fewer children per family . . . we purchase time, resources, and additional options: time to overcome our ignorance and to redress the mistakes of past growth, resources to implement solutions, and additional freedom of choice in deciding how we want to live in the future.

The farther one looks ahead in time, into the twenty-first century, and the farther out in space, to the rest of the world, the more pressing the problem seems to become.

In the past few years, the relationship of population trends to environment/resource matters has provided a battleground for intellectual conflict; controversy within the biological community (Ehrlich versus Commoner), between ecologists and economists (partly different questions and values, partly different time frames), and which is in some ways class-related (e.g., the American poor against the middle class "cop-out," the developing countries against the affluent and "wasteful" ones). At the least, population trends are interwoven with environmental and resource issues, in fact and in perception, and increasingly with a larger scope. (For a useful summary of relationships, see table 4, compressed to population-related columns only, from Sterling Brubaker, *To Live on Earth: Man and His Environment in Perspective*, published for Resources for the Future by Johns Hopkins Press, 1972.)

Political Aspects

Within the past few years, a small number of political scientists have begun to develop an explicit interest in the interrelationships between population and politics. There are current efforts to reexamine empirically the presumed relationship between population dynamics and political conflict; so far, with the conclusion that demographic trends do not appear in themselves to be primary causes of conflict either internationally or intranationally. Moreover, recent studies of the political consequences of rapid migration and urbanization appear to refute earlier prophecies of political doom resulting from such population trends; for example, the migration outpacing the ability of urban governments to cope, with a concomitant breakdown of social and political controls and exploitation of the urban masses by radical demagogues. Instead, it now seems that the migrants are more quickly integrated into urban life than had been anticipated, largely because the aspirations that led them to migrate are being fulfilled to some extent. Studies of such political relationships still constitute a small tributary of the scientific mainstream, but perhaps it will grow over the next five to ten years and investigate population concerns, not just population trends, of the international scene.

Developments in the Programmatic Effort

Efforts to lower fertility in the developing world through family planning programs are not "solving the problem," but they are making some contribution thereto. The search for viable alternatives (at current levels of concern and resources) is not turning up substantial, workable opportunities, but the search continues: incentives, a stronger leverage through social change, "creation of demand" through communication. (For a recent review of the current situation, see Bernard Berelson, "An Evaluation of the Effect of Population Control Programs," paper presented at Oxford University, March, 1973; to be published by Clarendon Press in *Population and Its Problems: A Plain Man's Guide*, Wolfson College Lectures, 1973, edited by H. B. Parry.)

The central controversy in the field—social change *versus* family planning as the road to fertility decline—was recently addressed by a comparative analysis specified and developed in that paper. Here is an illustrative tabulation and its text:

> Both factors are important. At each level of program the developmental setting makes about a three-fold difference in annual acceptances and at each level of development the programmatic effort makes a two-fold difference. Taken together, they define the range of programmatic effort, given the present technology of fertility control from, say, 10-15 percent of the MWRA non-users annually with a good program in a favorable setting down to 2 percent or less with a weak program in an unfavorable setting. But both readiness and effort matter. Thus we should guard against the unqualified either/or: family planning is either impossible in the absence of modernization or unnecessary in its presence. . . . So there is room in the transition for earlier rather than later intervention, and on this kind of problem the thin edge of the wedge leads to a big difference over time. Thus a service program, while not "population control" in itself, can be ready for whatever motivation is produced by general development.
>
> Moreover, note that there is an implied relationship between setting and program themselves: the more modern countries can carry on stronger programs, and the less modern can build up a moderate program only with considerable effort (India and Pakistan). In other words, development extends to administrative capacity as to other matters. . . .

Overall, family planning programs—still the major means of intervention—are uneven in execution and in impact. The three-to-five-year trend of acceptors in national programs (as available) shows that most countries have not achieved substantial increases and that most of them are still going along at a low level, not over 3 percent acceptors of married women of reproductive age (MWRA) per year. (See table 6; in the typical developing country, the number of MWRA now increases by 2+ percent per year.)

At the same time, there have been encouraging developments in a few places other than the traditional four (Taiwan, South Korea, Hong Kong, Singapore), namely, in Iran, the Philippines,

Table 4

An Environmental Matrix

Environmental Problems by Order of Gravity	Causative factors 1. Size of population 2. Concentration of population 3. Per capita income level 4. Consumption pattern 5. Technology	Efficacy of possible value change bringing 1. Reduced population growth 2. Slower income growth and more equal distribution 3. Less burdensome consumption patterns 4. Curtailment of property rights
Amenity considerations		
Litter	4,3	3,2
Noise	2,5	N
Odor	5	N
Air, visibility aspects	2,5,4	2,3
Water quality, recreational aspects	5,2,1	2,1
City, aesthetic aspects	4,5	4,3
City, convenience and efficiency aspects	2,4	4,3,2
Country, aesthetic aspects	5,4,1	4,2,3,1
Access to country and nature	4	3,1
Human health effects		
Air pollution-combustion products	5,4,2,3	3,2
Water pollution:		
Pathogens	2,5	1
Nitrates	5	3,4
Industrial chemicals	5	2,1
Pesticides (via food chain)	5,1,3	3
Radioactivity	5,3	2,1
Heavy metals	5	N
Human genetic and reproductive effects		
Radioactivity	5,3	2,1
Pesticides	5,1,3	N
Industrial chemicals	5	2,3
Effects on ecological systems and the earth's life-supportive capacity		
Human occupancy of biospace	5,1,3,4	2,3,1
Ocean threats:		
Pesticides	5	N
Oil	3,4	2,3
Other chemicals	5	2,3
Erosion	5,1,3	4,2,1
Fertilizers and damage to mineral cycling	5	2,1
CO_2, albedo, and climate	5,1,3	2,1
Heat rejection:		
Local aspect	5,2	3
Global aspect	3,1	2,3,1

N = None, unknown, not applicable, negligible.

SOURCE: Sterling Brubaker, *To Live on Earth; Man and His Environment in Perspective*, published for Resources for the Future by Johns Hopkins Press, 1972.

Table 5

1971 Program Acceptors, as Percentage of Married Women of Reproductive Age Nonusers

Program Strength	Institutional Setting: Level of Program Development		
	High	Middle	Low
Strong	Taiwan 18.7 South Korea 14.3 Hong Kong 11.4 Singapore 8.6		
Moderate	Jamaica 13- Chile 9-	Mauritius 10.0 Thailand 9.1 Colombia 7.6 Iran 6.4 Costa Rica 6- Ceylon 5- West Malaysia 3.6 Tunisia 3.4	India 3.7 Pakistan 3-
Weak	Philippines 6.2	Honduras 6- Egypt 4.6 Guatemala 3- Ghana 2- Turkey	Indonesia 2- Nepal 2- Kenya 2- Morocco 1.0

Thailand, and Colombia, though sustaining those gains may still be in question. Moreover, relatively sharp fertility declines, over 1 point a year in the 1960's, have apparently been due in some part to family planning programs in South Korea, Taiwan, Hong Kong, Singapore, Mauritius, and Fiji. (Note that in a few of these places, the smaller ones, the declines have rivaled the famous Japanese case in speed; that they are small islands, plus one peninsula; and that most are Chinese-related.) At the moment, we do not have the technical means to say beyond a doubt how much effect a family planning program has had *on the birthrate*; at the same time, one cannot prove decisively that the good family planning program has had no effect. It is not a satisfactory position, but it is where we are.

Table 6

Trend in Acceptors, 1967–1971

Achieved Level by 1971	Amount of Increase in Annual Acceptors: Considerable	Some	Trivial or None
High (6%+)	Colombia Philippines Taiwan Thailand	Hong Kong South Korea	Chile Jamaica Mauritius Singapore
Medium (3-6%)	Honduras Iran	Costa Rica Egypt West Malaysia	India
Low (3%-)		Ceylon Dominican Republic Ecuador Indonesia Kenya Nepal Nicaragua Tunisia	Ghana Morocco Nigeria Turkey

For perspective, it is worthwhile to look at other large-scale programs of social and medical development. Various social programs to reduce illiteracy, upgrade the status of women, and improve race relations, as well as medical campaigns against malaria, smallpox, and venereal disease, have been attempted. They do not involve all the problems faced in changing institutionalized norms and practices regarding sex and reproduction, yet they too have met with mixed results and slow progress. So comparatively it is understandable that the recent programs and technologies of fertility control have not been more markedly successful, in the absence of rather sharp shifts in social institutions (as reported in China)—and that time is required.

Programmatic developments in delivery systems are being reported elsewhere on the agenda. Here one need only note such "new" attempts or proposals as (1) the peer motivators of Sialkot (Pakistan) and Honduras; (2) the extended use of traditional personnel and paraprofessionals in Thailand, West Malaysia, Iran, and Ceylon; (3) the vasectomy camp experiences in India; (4) acceptance of postpartum and postabortal contraception, particularly IUD's; (5) the increased legalization of induced abortion (India, United States, South Korea); (6) the "sewing factory" approach to lowered fertility, through employment of women, in Egypt; (7) the maternity-centered effort of the so-called Taylor/Berelson program; (8) the perhaps growing use of antinatalist incentives, which raise their own ethical and political issues; and (9) the effort of the International Committee for Applied Research in Population of the Population Council.

With regard to inputs of funds and technical personnel, both have increased in the past few years. Funding of population activities (to be treated elsewhere on the agenda) has roughly doubled since 1970. As for resident technical personnel, a first approximation is that the number has increased slightly in the family planning field but somewhat more in other aspects of population; and that the increases have come mainly in the Near East, Africa, and Latin America, and mainly from American universities and UN/WHO/PAHO.

Summary

What major themes emerge from this review of current developments in the population field, for discussion by the Bellagio III community? Among others, these:

1. The picture is uneven. There are bright spots: fertility and mortality declines, still-spreading favorable policies, expanding institutions and personnel, growing scientific knowledge, policy interest in the developed countries too. And there are dim spots: weak programs, urbanization and employment pressures in the short run, increased numbers ahead requiring accommodation in the middle- and long-run, slow-changing determinants, no visible technological impact of substance, few emerging programmatic alternatives.

2. The lack of convinced leadership: what more can be done?

3. The "backlash". the dangers in the potential clash of orthodoxies. The 1970's are different from the 1960's: the end of both honeymoons? (*i.e.*, the economic rationale and family planning). Population as *one* element in development plans, and a better understanding thereof.

4. Family planning programs are both inadequate and gratifying: inadequate when measured against the need, gratifying when measured against the magnitude and difficulty of the task. What is par?—considering political obstacles, administrative deficiencies, cultural resistance, and time frame.

5. The strategic issue: where should energy and resources be most rationally applied? If the criteria are a positive policy, a

relatively favorable setting, population size (20 million plus), and high fertility (crude birth rate of 40 plus), then the countries are: Philippines, Thailand, Turkey, Egypt, Iran, and Colombia. If an unfavorable setting is accepted, then the giants emerge: India, Indonesia, Bangladesh, and Pakistan.

6. Approaches to programmatic intervention: improvements within family planning programs, alternatives beyond. Tactical issues: the incentives question, concentration on the more likely sites or the more needy, relative stress on improved technology as against management and "motivation," achievable improvements in delivery systems, the role of technical assistance in the 1970's.

7. The case of China: presumably, if reports are approximately correct, the only large "underdeveloped" country with a (relatively) low birthrate. If so, how did it happen? The need for close study of this critical case: perhaps an opportunity for Bellagio IV.

8. There is a continuing shortfall from what is needed in social science measurement—of population changes, of the evaluation of current efforts, of determinants and consequences.

Appendix 1

Assessments of Conditions and Trends in Nine Major Areas of Social Concern, for the World: 1952, 1963, and 1970.

(Material excerpted from selected editions of the United Nations *Report on the World Social Situation.)*

Topic and Year		Relevant Abstract[a]
Environmental quality	1952:	Not discussed.
	1963:	"To an increasing extent man is able, given the financial resources and suitable guidance, to improve the environment in which he is placed. ... This renewal of interest in physical surroundings comes not only from a desire for improved amenities; it is also a rediscovery of the importance of the environment to health. ... Many countries suffer a heavy burden of illness ... associated with indifferent sanitary conditions. These, and other countries with high standards of sanitation, find themselves faced with new hazards to health arising from industrialization and urbanization." (p.34)
	1970:	"The close relationships between environment and health have been increasingly recognized and stressed in recent years, especially so in economically developed nations and those now undergoing industrialization. ... Environmental hazards to human health and well-being are becoming more complex, more encompassing, and more subtle." (p.167)
Health	1952:	"Against disease the general advance has been substantial in recent years and, in some of the less-developed areas, it has been dramatic, with death rates dropping as much as 50 per cent in a few years' time. ... Nevertheless, millions of human beings are still ravaged by diseases that are readily amenable to control—diseases that cause not only untold misery but also immense economic loss." (p.5) "In general, reported death rates have been declining, for longer or shorter periods all over the world. In the many areas not reporting death rates there has presumably also been at least some decline, because of fewer famines and fewer widespread epidemics in the last several decades; but the decline has probably been of a limited nature as yet for most of those areas." (p.12)
	1963:	"... progress was particularly outstanding in some indicators of health." (p. 1) "The health of the world was better in 1960 than it had been in 1950. While precise comprehensive information is lacking ... the broad trend in the world health is unmistakable. ... The striking downward trend of mortality in the very great majority of economically under-developed countries serves to show the great advances made in disease prevention and cure." (p.23)
	1970:	"No spectacular progress has been made in the field of health, but the generally steady trend towards improvement in terms of falling mortality rates, rising life expectancy, and more effective communicable disease control has been confirmed." (p.viii) "Although the period under review has not been marked by any spectacular progress in the health situations of the world, the general trends towards improvement which began taking shape during the last decade have been confirmed." (p.163)
Food and nutrition	1952:	"For the world as a whole food supplies measured in calories ... were 6 percent lower in recent years than in the prewar period. ... Moreover, some of the worst-fed areas of the world have been hit more heavily than is indicated by the average decline for the world as a whole. ... The situation, unsatisfactory as it was before the war, has markedly deteriorated (despite some gains) since the early postwar period." (p.41)
	1963:	"... progress ... with regard to food consumption ... showed but a slow upward trend." (p.1) "In most under-developed regions the calorie intakes show a slow but steady upward trend. ... Although from the quantitative viewpoint there has been some improvement, the picture regarding quality, as reflected by protein of animal origin, is quite different. In the worst-fed regions, very little progress, if any, has been attained in this direction ... the major food problem in the less developed countries ... continued to be under-production." (p.40)
	1970:	"There is evidence of a gradual increase in *per capita* calorie consumption in many developing countries .... Nevertheless malnutrition and undernutrition continue to constitute basic causes of ill-health and low productivity in the developing regions." (p.viii)
Housing	1952:	"[There] has been a deterioration in the housing situation in many areas, particularly in less-developed areas where economic resources and technical means to cope with it are lacking." (p.4)
	1963:	"... progress was ... unsatisfactory with regard to housing." (p.1) "Satisfactory levels of housing output have been achieved and sustained in the most developed countries of Europe, in Australia, Canada, New Zealand and the United States. ... In the past decade housing output has lagged behind gross needs in some less developed countries of Southern Europe and in most countries of Africa, Asia, and Latin America." (pp.52,55)
	1970:	"While the housing situation in more developed regions has generally improved or maintained approximate stability, it has elsewhere declined sharply from the already inadequate levels prevailing in earlier years." (p.ix)
Education and literacy	1952:	"Against illiteracy and ignorance, some notable recent advances have been made, but the obstacles are great ... the less-developed countries, with few exceptions, have found universal schooling beyond their present financial means." (p.3)
	1963:	"... the quantity of education has increased everywhere and literacy rates have risen significantly." (p.1) "In spite of remarkable progress during the fifties, education in most parts of the world has not kept pace with the demand or with national aspirations. The situation is most serious in the less developed regions." (p.62)

	1970:	"Global educational progress has been most clearly manifested in a general trend toward longer schooling and in further enrollment increases at secondary and higher levels; primary school enrollment has almost everywhere grown at a relatively slower pace, and in advanced countries has actually declined. . . . Despite all recent efforts, there is an absolutely larger number of illiterates in the developing regions (and therefore in the world) than ever before." (p.ix)
Employment, wages, and income	1952:	"Against poverty, the advance has been uneven, and generally least impressive where poverty is greatest." (p.3) . . . "The situation today is in many respects better than it was sixty-odd years ago, when an international conference . . . was advocating, as a desirable standard that might ultimately be achieved . . . the exclusion of children o. 12 years from employment in mines. . . ." (p.119)
	1963:	". . . progress was . . . unsatisfactory with regard to . . . employment, personal income, and consumption." (p.1) "The employment situation developed favorably during the same period [1950–1960] at least in the economically more advanced countries. [The situation in most of the less developed countries was characterized by] more rural unemployment, overt or hidden in the form of underemployment, a continuing drift to the towns in search of work, a swelling of the services sector and rising urban unemployment on account of the relatively small absorption of labor involved in the high rates of growth of the modern sector." (p.74)
	1970:	"In all regions, *per capita* incomes have risen, but the trend is impressive only in the more developed regions; in the developing regions . . . the increases have been merely nominal [and] . . . the dimensions of unemployment and underemployment have been absolutely (and probably also relatively) larger than ever before." (p.viii)
Social security	1952:	Excluded from the report, see p. 115 and preface.
	1963:	"The decade has witnessed continued evolution of established social security systems. . . . New schemes have been introduced and, in developing countries, long-term programs . . . have been planned and in most cases the initial phase of the program has been carried out. . . . It is usually impossible . . . to include at the outset all workers in the social security scheme." (p.100)
	1970:	"Social security programs in the more developed regions have undergone continuing modification, mainly in the directions of further extensions of coverage, inclusion of new types of benefits and improvements in the quality of service. . . ." (p.ix) "As compared to industrialized countries, the developing countries devoted a relatively small part of their national product to social security which, over the years, has not shown any striking improvement." (p.21)
Distributional equality International	1952:	"The gap between the rich and the poor countries in general levels of production and consumption is wider than before the Second World War. . . ." (p.3)
	1963:	"In *per capita* national income . . . the gap widened considerably in absolute terms but in relative terms, the picture was obscured by the fact that the fastest growth generally took place in middle-income countries. . . ." (p.1)
	1970:	"Changes in levels of living during the period . . . testify to the persistence and even growth of interregional welfare disparities. . . ." (p.viii)
National	1952:	". . . a certain levelling process appears to be under way in countries with relatively high and expanding national incomes. . . . Yet for the great masses of the people [in the less-developed countries] . . . general poverty does not appear to have been substantially reduced in recent years—it has, in wide areas, quite possibly been aggravated. . . ." (pp.3–4)
	1963:	"While trends in income distribution are difficult to detect, it would seem safe to say that, with certain exceptions, there has not been notable improvement either in rich countries or poor countries." (p.2)
	1970:	"Especially but by no means exclusively in the developing regions the impact of rising *per capita* incomes . . . is seriously weakened by major distributional inequalities. There is evidence to suggest the disparities of incomes and wealth between richer and poorer population strata have in many countries tended to widen in the process of economic growth and technological development." (p.viii)
Status of women	1952:	"In the world as a whole, women are, in fact, engaged in all types of work from heavy load carrying to the liberal professions, although locally various restrictions are placed on their employment by tradition, trade regulation, or law." (p.113)
	1963:	"Discrimination in education constitutes a serious problem. . . . There was a steady tendency for girls to make up a larger percentage of enrollments. . . . Despite these changes . . . there was still a serious problem in regard to the education of girls." (p.70)
	1970:	"Education has become increasingly available to females, among whom the growth enrollment rate has been faster than for males." (p.ix) "Many developing countries are focussing their attention on the education and training of women for family and community life. These programs are meant not only to improve the status of women as such, but also to improve the well-being of their children." (p.227)

a. Page numbers refer to *Report on the World Social Situation* for the year specified.

SOURCE: United Nations, *Preliminary Report on the World Social Situation*, Department of Social Affairs, New York, 1952.
United Nations, *1963 Report on the World Social Situation*, Department of Economic and Social Affairs, New York, 1963.
United Nations, *1970 Report on the World Social Situation*, Department of Economic and Social Affairs, New York, 1970.

Appendix 2

"Systems Analysis"

This appendix lists various attempts at "systems analysis" of fertility and family planning. It is intended to be illustrative of various methods used rather than exhaustive. It is organized into categories by typical methods of analysis.

1. Regression and Path Analysis

1.1. T. Paul Schultz. *Evaluation of Population Policies: A Framework for Analysis and Its Application to Taiwan's Family Planning Program*, June, 1971. Rand, Santa Monica, California 90406.

1.2. Albert I. Hermalin. "Taiwan: Appraising the Effects of a Family Planning Program Through an Areal Analysis," *Working Paper No. 14, Taiwan Population Studies*, November, 1971. Population Studies Center, University of Michigan.

1.3. Sagar C. Jain. *Comparative Study of Effective and Non-effective Family Planning Programs in India: Report of the Feasibility of Study Design*, April, 1971. Carolina Population Center.

1.4. George B. Simmons. *The Indian Investment in Family Planning.* The Population Council, 1971, pp. 110–119.

2. Macroeconomic Models

2.1. A. J. Coale and E. M. Hoover. *Population Growth and Economic Development in Low Income Countries.* Princeton, New Jersey, Princeton University Press, 1958.

2.2. W. E. McFarland et al. *Description of the Economic-Demographic Model* (68 TMP-120, TEMPO). Santa Barbara, California, Center for Advanced Studies, 1968. Also 69 TMP-50.

3. Global Analysis

3.1. J. W. Forrester. *World Dynamics.* Cambridge, Massachusetts, Wright Allen, 1971.

3.2. D. H. Meadows et al. *The Limits to Growth.* New York, Potomac Associates, 1972.

4. Demographic Models

4.1. Tomas Frejka. "Reflections on the Demographic Conditions Needed to Establish a United States Stationary Population Growth," *Population Studies,* vol. 22, no. 3, Nov., 1968, p. 379–397.

4.2. S. N. Singh and T. Bhaduri. "Maximum Likelihood Estimates for the Parameters of a Continuous Time Model for First Conception," *Demography,* vol. 9, no. 2, May, 1972, pp. 249–456.

4.3. J. P. Bongaarts and W. D. O'Neill. "A Systems Model for the Population Renewal Process." *Demography,* vol. 9, no. 2, May, 1972, pp. 309–320.

5. Linear Programming

5.1. C. E. Lawrence et al. "A Mathematical Model for Resource Allocation in Population Problems." *Demography,* vol. 9, no. 3, 1972, pp. 465–483.

5.2. Joe Colosi and Juan Prawda. "A Resource Allocation Model to Maximize Initiations in a Family Planning Program." Mimeographed.

5.3. W. A. Reinke. "The Role of Operations Research in Population Planning." *Operations Research* 18, 1970, pp. 1099–1111.

6. Games and Simulation

6.1. A. G. Feldt. *POPM I and II.* Communication to the Population Council, 1972.

6.2. R. W. O'Conner. "Use of a Simulation Model as a Decision Support Tool in the Management of Metropolitan Family Planning Programs." Mimeographed.

6.3. G. L. Urban. "A Model for the Management of Family Planning Systems." *Working Paper No. 613-72,* Sloan School of Management, M.I.T., 1972.

6.4. D. G. Horwitz et al. *POPSIM, A Demographic Microsimulation Model.* North Carolina, Research Triangle Park, 1969.

6.5. H. Hyrenius. "Demographic Simulation Models," in *World Views of Population Problems,* E. Szabady, Akademiai Kiado, Budapest, pp. 171–175.

6.6. H. Hyrenius and I. Adolfsson. *A Fertility Simulation Model, Report 2,* Gothenburg, Sweden, University of Gothenburg, 1964.

6.7. J. C. Ridley, et al. "The Effects of Changing Mortality on Natality: Some Estimates on a Simulation Model." *The Milbank Memorial Fund Quarterly,* January 45/1, 1967, pp. 77–97.

6.8. J. C. Ridley and M. C. Sheps. "An Analytical Simulation Model of Human Reproduction with Demographic and Biological Components." *Population Studies* 19(3), March, 1966, pp. 297–310.

6.9. H. Guthrie and G. Orcutt. "The Urban Institute Micro-analytic Simulation Model of Household Behavior." Mimeographed.

6.10. K. Venkatacharya. "Reduction in Fertility Due to Induced Abortions: A Simulation Model." *Demography,* vol. 9, no. 3, 1972, pp. 339–352.

6.11. R. A. Potter and J. M. Sakoda. "A Computer Model of Family Building Based on Expected Values." *Demography,* vol. 3, no. 2, 1966, pp. 450–461.

7. Other Models

7.1. A. Rogers. "Matrix Methods of Population Analysis." *Journal of the American Institute of Planners,* vol. 32, no. 1, January, 1966, pp. 40–44.

7.2. N. Keyfitz. *Introduction to the Mathematics of Population,* Reading, Massachusetts, Addison-Wesley, 1968, pp. 271–292.

7.3. U.N. *The Concept of a Stable Population: Application to the Study of Populations of Countries with Incomplete Demographic Statistics.* ST/SOA/Series A/39, 1968.

7.4. C. P. McLaughlin et al. *Family Planning Computer Gaming: The Quicktest Model,* Program Design Paper 1. Carolina Population Center, University of North Carolina at Chapel Hill, 1972.

7.5. S. F. Heartwell. "A Simulation Model for Analyzing Patient Waiting Time in a Family Planning Outpatient System." New Orleans, Louisiana, Tulane School of Public Health and Tropical Medicine, 1972. Mimeographed.

1. This paper rests on considerable documentation prepared by several of my colleagues at the Population Council, so this is in a genuine sense a collective product. I am personally and professionally indebted to all of them for their assistance.

2. Based on Tomas Frejka, *The Future of Population Growth,* New York: John Wiley & Sons, 1972.

3. Maxwell Stamper, "Population Policy in Development Planning," *Reports on Population/Family Planning,* No. 13, May 1973.

4. Bernard Berelson, ed., *Population Policy in Developed Countries,* New York: McGraw-Hill, forthcoming 1973.

5. Ta Ngoc Chau, *Population Growth and Costs of Education in Developing Countries,* UNESCO: International Institute for Education Planning, 1972; and Gavin Jones, *Population Growth and Educational Planning in Developing Nations,* New York: Appleton-Century-Crofts, forthcoming 1974.

Summary Table

Project ID No.	Inputs	Outputs	Time Span Used	Time Span Potential	Geographical Coverage Used	Geographical Coverage Potential	Model Type
		Regression Analysis					
T. P. Schultz, 1.1	Program variables (man-months by type), child death rate, age composition, and education	Birthrate, crude and standardized	1964-1968	Fl.	Taiwan	Any country	Causal structure model using nonlinear regression
Hermalin, 1.2	Sociodemographic structure, health worker input and acceptance rate for IUD	Birthrates, crude and specific for age groups, TFR	1966-1969	Fl.	Taiwan	Any country	Path analysis
S. Jain, 1.3	Socioeconomic structure and modernization, program inputs	Acceptances (IUD and sterilization)/1000 population and births averted	1967-1969	Fl.	India	Any large or intermediate country	Systems formulation using correlation and regression analysis
Simmons, 1.4	Literacy, urbanization, per capita income, clinics/population, workers/population	Acceptance/population	1966-1967	Fl.	India	Any country	Correlation and regression
		Macroeconomic					
Coale, 2.1	Initial values of economic and demographic variables and parameters; population projections by age-sex and by consumer units	National and per adult consumer income, welfare and developmental expenditure with different fertility trend assumptions	1956-1986	Fl.	India	Any closed demographic-economic system	Macroeconomic

Fl. = Flexible

Data Requirement None	Data Requirement Lenient	Data Requirement Stringent	Systems Scale	Analysis Unit	Distinguishing Features	Model Utilized Where	Model Utilized When	Sponsorship	Substantive Conclusions
		Yes	Country	Township (330 units)	Cubic regression on program variables, lag in birthrate decline			AID	Marginal cost increased from $2.60 in 1965 to $43.20 in 1968 per birth averted. VHEN workers marginally more effective in the "program mix."
		Yes	Country	Township	Path analysis based on "causal" scheme. Repeated for three levels of fertility of townships			University of Michigan	The analysis served to identify areas and age groups in which program acceptance led to fertility decline and those in which it served as substitute for prior contraception outside the program.
		Yes	State and nation	District and state	Performances compared at both state and district levels			IBRD	Observed correlations between acceptance and variables of modernization accentuated by other factors, such as administrative decisions and health infrastructure.
		Yes	Country	States/ Districts				Population Council	Variations in acceptance rates explained more by program and less by socioeconomic variables.
	Moderate		Country	NA	Allows for direct growth and welfare outlays and various fertility trends	India, Planning Commission		Princeton University	Rapid increase in number of consumers diverts national resources to consumption and "social overheads," away from savings and investment. Smaller per capita consumption due to a large number of consumers may affect the health and productivity of labor adversely.

NA = Not applicable

SOCIOPOLITICAL IMPLICATIONS OF FAMILY PLANNING PROGRAMS AS AN ASPECT OF POPULATION POLICIES AND DEVELOPMENT PLANNING IN AFRICA

Francis Olu. Okediji

Introduction: Conceptual Clarification

Population policy and development are two important concepts that need clarification at the outset.

What is a population policy? A *policy* must possess three analytically distinct but mutually related criteria: (1) an official expression of intentions concerning desirable or undesirable conduct; (2) a provision for inducements, positive or negative or both; and (3) some provision of means for implementing intentions and applying sanctions.[1] Thus, a *population* policy must encompass the three differentiated criteria, and these criteria would be partially dependent upon population theories that serve as explanatory models for bringing about changes in the composition, distribution, and growth of a population. In the literature of population studies, two theoretical schools of thought appear to be in the ascendancy within the contemporary period. The foremost exponent of the first is Thomas Malthus, who argued that economic development promotes fertility. From the perspective of the Industrial Revolution in England at the time Malthus wrote, he was of the opinion that an increase in the demand for labor increased the proportion of persons marrying and reduced the average age at marriage; and that the change in marriage pattern brought about an increase in fertility.[2] The second school is based on the theoretical assumption that economic development brings about a decline in fertility levels. This theoretical perspective is forcefully articulated by W. S. Thompson, C. P. Blacker, K. Davis, F. W. Notestein, A. J. Coale and E. M. Hoover, and others.[3] It is, however, the Malthusian ideology that unfortunately tends to dominate the literature on African population.[4] We will return to this observation later.

Four types of population policies that are analytically distinct but mutually reinforcing can be delineated; policies that: (1) are primarily concerned with economic growth; (2) place emphasis on political transformation; (3) focus on social transformation; and (4) are initiated to bring about demographic transformation with particular reference to fertility, mortality and morbidity, nuptiality, and migration. Succinctly, they may be described as economic, political, social, and demographic policies, and as previously mentioned, the interrelations between these four types are emphasized. For example, it can be argued logically that in those African countries where there is a rapid rate of population growth, any policy that brings about an appreciable decline in the rate of population growth is also an economic policy. We can argue further that any policy that increases employment opportunity structures and brings about significant improvement in income levels, in social mobility, and life-styles in general is also a demographic policy to the extent that it sets into motion those forces within the sociocultural environment that will motivate people to adopt the small family norm. Political policies, on the other hand, provide a rationale for the transformation of economic, social, and demographic structures within a country.

Despite these interconnections, the four types of population policies can be differentiated by their respective *contents*. Also, there is an important difference between population policy and demographic policy. That is, population policy has a broader perspective than demographic policy because it incorporates within its orbit policies of social security, status of women, pollution and environment, health, employment, education, and so forth. In addition, population policy is an organic part of national development planning.[5]

The concept of development has been variously defined in the literature, and no attempt will be made here to review such definitions. We will take our cues with regard to the definition of this concept from the range of developmental activities differentiated by the United Nations General Assembly Resolution on the Second Development Decade:

> As the ultimate purpose of development is to provide increasing opportunities to all people for a better life, it is essential to bring about a more equitable distribution of income and wealth for promoting both social justice and efficiency of production, to raise substantially the level of employment, to achieve a greater degree of income security, to expand and improve facilities for education, health, nutrition, housing and social welfare, and to safeguard the environment. Thus, qualitative and structural changes in the society must go hand in hand with rapid economic growth, and existing disparities—regional, sectoral and social—should be substantially reduced. These objectives are both determining factors and end-results of development; they should therefore be viewed as integrated parts of the same dynamic process. . . .[6]

Useful as this definition is, it would not be difficult to find situations in the planning process where there are conflicts among the subgoals of national development. For example, there may be a conflict between the goal of evenness of development and the "efficiency of production" by concentrating industrial projects in areas where conditions for maximizing profits are more favorable. This conflict is more problematic and complex when we relate the goals of population policy to those of socioeconomic development. Some governments may offer incentives to low-income parents of high parity to undergo sterilization in order to control the high rate of population growth, which may have dysfunctional consequences for their economies. Such an inducement raises not only ethical problems but the whole question of fundamental human rights.

The clarification of the two important concepts of population policy and development and the concerted attempt we have made to explicate the relationship between them now enable us to articulate the aims of this essay. We will (1) analyze the demographic structures and processes in Africa; (2) discuss the ways in which different African governments perceive these demographic structures and processes in relation to development planning; and (3) examine critically family planning programs and population policies in Africa within the overall context of national development planning.

The Demographic Situation in Africa

Fertility and Mortality

It must be emphasized that rapid population growth in Africa is a relatively recent phenomenon; and our knowledge of this process has been sharpened by several conferences and seminars within the last decade or so, which have focused principally on population growth and development in Africa.[7]

The crude birth and death rates for the major subregions of Africa and for particular countries during the periods 1950-1955 and 1965-1970 are depicted in table 1. Some important inferences can be drawn from this table: (1) There is a general trend of decline in death rates, although they are still quite high. The declining trend in mortality rates could be explained in part by increasing control of infectious diseases such as malaria, smallpox, tuberculosis, and so forth. Activities in this area can be further intensified through public education and more investments in training medical and paramedical personnel who will deliver health services to the African masses. This would guarantee a more even decline in fertility rates throughout this region. (2) Fertility trends appear to be still fairly high in Africa, although there is a belt of low fertility in Central Africa. The socioeconomic and cultural factors explaining fertility trends in Africa have been collated by Okediji.[8]

Age Composition

Table 2 shows an estimated percentage distribution of African population in rather broad age categories. This table shows very clearly that a large percentage of the population is under 15 years of age. This can be explained by two interacting factors: rapid population growth and declining mortality. It is rather obvious that the disproportional decline in mortality shows its greatest dysfunctional consequences on infants and younger children, who are most vulnerable to infectious diseases.

The pyramidal shape of the age structures of most African nations is explained more by fertility and mortality trends than by the process of migration. The economic burden of high fertility and declining mortality levels in African countries need not be overemphasized.

Pattern of Population Distribution and Migration

The rural-urban population breakdowns of some selected African countries are presented in table 3. Certain empirical generalizations can be deduced: (1) A large percentage of the population of most African countries are rurally based; (2) it follows from the first generalization that a large proportion of the rurally based African population are engaged primarily in agriculture.

Migration from rural to urban areas constitutes an important demographic process in recent times in Africa. According to some estimates given by the Economic Commission for Africa, urban growth rates, especially in the major cities, have averaged two to three or more times the overall rate of population growth.[9]

Table 1: Estimated Crude Birth and Death Rates of Natural Increase and Life Expectancy at Birth for Selected Subregions and Countries in Africa: 1950–1955 and 1965–1970

Subregion and Country	Crude Birth Rate				Crude Death Rate				Rate of Natural Increase				Life Expectancy at Birth			
	1950–1955	1955–1960	1960–1965	1965–1970	1950–1955	1955–1960	1960–1965	1965–1970	1950–1955	1955–1960	1960–1965	1965–1970	1950–1955	1955–1960	1960–1965	1965–1970
North Africa	48.0	47.5	47.5	46.9	23.7	21.2	19.1	16.9	2.43	2.63	2.84	3.00	42.3	44.8	47.3	49.8
Algeria	51.0	50.8	50.4	49.1	23.9	21.2	19.4	16.9	2.71	2.96	3.10	3.22	43.1	45.6	48.1	50.7
Sudan	50.0	51.4	49.3	48.9	26.3	23.0	21.3	18.4	2.37	2.84	2.80	3.05	40.1	42.6	45.1	47.6
Tunisia	46.4	46.7	46.5	46.3	22.7	20.3	17.9	16.0	2.37	2.64	2.86	3.03	43.6	46.1	48.6	51.7
U.A.R.	44.9	43.2	44.5	44.1	21.6	19.9	18.0	16.5	2.33	2.33	2.65	2.76	42.4	44.9	47.4	49.9
West Africa	48.8	48.8	49.0	48.8	28.3	26.8	25.2	24.3	2.05	2.20	2.38	2.45	32.3	34.5	36.8	39.2
Ghana	49.6	49.2	47.5	46.6	23.0	22.0	19.9	17.8	2.66	2.72	2.76	2.88	38.4	40.9	43.4	46.0
Mali	50.1	50.1	49.4	49.8	33.1	31.7	29.9	26.6	1.70	1.84	2.04	2.32	33.5	34.7	36.0	37.2
Nigeria	49.1	49.4	50.0	49.6	27.5	26.2	24.0	24.9	2.16	2.32	2.50	2.47	31.3	33.4	35.9	38.5
Senegal	47.1	46.3	46.5	46.3	29.4	27.4	25.8	22.8	1.77	1.89	2.07	2.35	33.4	35.9	38.4	41.0
Central Africa	45.5	45.2	45.0	45.3	29.3	27.6	26.1	24.3	1.62	1.76	1.89	2.10	34.5	35.7	36.9	39.3
Cameroon	43.7	43.2	42.7	43.1	28.8	27.1	25.9	22.8	1.49	1.61	1.77	2.03	33.4	35.9	38.4	41.0
Zaire	44.4	44.5	44.5	44.4	28.0	25.9	24.5	22.7	1.64	1.86	2.00	2.17	38.3	38.4	38.4	41.0
East Africa	47.2	46.8	46.4	46.6	26.8	25.3	23.6	21.8	2.04	2.15	2.28	2.48	35.0	37.5	40.0	42.3
Ethiopia	45.7	45.6	45.0	45.6	30.5	29.2	27.5	25.0	1.52	1.64	1.75	2.06	31.3	33.4	35.9	38.5
Kenya	48.6	47.7	47.0	47.8	18.3	18.2	18.3	17.5	3.03	2.95	2.87	3.03	40.0	42.5	44.9	47.5
Tanzania	47.6	47.0	48.1	47.2	26.1	25.1	23.7	22.1	2.15	2.19	2.44	2.51	34.2	36.7	39.2	41.8

SOURCE: United Nations, *Estimates of Crude Birth Rates, Crude Death Rates, and Expectations of Life at Birth, Regions and Countries 1950–1965*, ESA/P/WP/38, February, 1971.

Table 2:
Estimated Percentage Distribution of the Population By Age Group—1970

Subregion and Country	Age Groups 0–14	15–44	45–59	60+
North Africa				
Algeria	47.2	39.8	8.3	4.7
Sudan	45.1	41.8	8.7	4.4
Tunisia	45.4	40.5	8.8	5.2
U.A.R.	42.8	42.5	9.5	5.2
West Africa				
Ghana	46.6	42.7	8.0	2.7
Mali	43.9	42.5	9.1	4.5
Nigeria	43.0	48.4	5.1	3.5
Senegal	42.3	42.9	9.5	4.8
Central Africa				
Cameroon	41.3	41.4	11.9	5.4
Zaire	44.3	41.8	9.3	4.6
East Africa				
Ethiopia	41.6	43.2	10.0	5.2
Kenya	46.6	41.6	7.9	3.9
Tanzania	44.4	42.4	8.8	4.4

SOURCE: United Nations, *Estimates of Crude Birth Rates, Crude Death Rates, and Expectations of Life at Birth, Regions and Countries* 1950–1965, ESA/P/WP/38, February, 1971, and UNECA, *Survey of Economic Conditions in Africa*, 1970, table A65.

Table 3: Percentages of Population in Towns of 20,000 and More Inhabitants for Selected African Countries

Subregion and Country	Year	Percentage of Population in Towns of 20,000 and More Inhabitants
North Africa	1960	24
Algeria	1966	26.5
Sudan	1962	3.9
Tunisia	1966	22.9
U.A.R.	1966	38.2
West Africa	1960	12
Ghana	1960	12.3
Mali	1962	4.7
Nigeria	1963	14.0
Senegal	1960–1961	22.5
Central Africa	1960	8
Cameroon	1962–1964	6.6
Zaire	1959	9.1
East Africa	1960	5
Ethiopia	1965	4.7
Kenya	1962	5.9
Tanzania	1967	5.1

SOURCE: Economic Commission for Africa, *Demographic Handbook for Africa*, March, 1968, pp. 39–42.

In the rapidly increasing literature on migration in African countries, the explanations of migration concentrate primarily on push factors that are related to low socioeconomic conditions in rural areas and pull factors that are related to high socioeconomic conditions and greater employment opportunities in towns and cities.[10] The conventional model of rural-urban migration studies now prevalent on the African scene needs reorientation. What of the phenomenon of rural-urban migration, and the operative factors in this process? Why do people move from "high" quality areas to "low" quality areas? Are there areas where migration does not take place? If so, why? Answers to these questions, through well-designed research, will contribute significantly to the formulation of migration policies.

For purposes of recapitulation, the populations of African countries, although there are divergent features as well, tend to have the following common characteristics:

1. Relatively low densities in many countries; except in a few areas, there is no pressure on land. This measure of density constitutes, however, only one aspect of the pressure of population in relation to resources and potentialities for development.
2. A large unevenness in the distribution of population among the different countries, with a multiplicity of small hamlets and villages, a few medium-sized towns, and a small number of large cities that are becoming overcrowded.
3. Although there are very high rates of urban population growth, there is a low degree of urbanization.
4. Although there is still the possibility of slight increases of fertility in some population groups, fertility levels are constantly high.
5. Mortality levels are also quite high, and there are indications toward decline of mortality in some countries.
6. High rates of population growth, which are likely to accelerate in the future to the extent that fertility remains constant and the present high mortality continues to decline.
7. The percentage of children in the population is large, and this is accounted for partly by high fertility. This heavy dependency burden has implications for heavy expenditures required for education and provision of jobs for the growing population.[11]

Several questions can be raised at this point. How do the different African governments perceive the influence of population growth and distribution on development, and vice versa? What factors make them perceive these relationships the way they do? What concerted actions, if any, have they taken to back up their assessments of the situation?

Population and Development in African Countries: Appraisal of the Divergent Views of Political Elites

Population and development are not linked by a simple cause and effect mechanism, but, rather, the interconnections between them are the consequences of numerous interactions and transformations that reflect the complexity of the variables and processes involved. The discussion of and thinking on economic and social development are conventionally focused on the intermediate determinants of economic growth—with particular reference to the productive resources (capital, labor, and land) and their efficiency—as well as the manifestations of social progress in different sectors (including housing, education, health, and so on); yet it is now widely accepted that development is the macroprocess of modernization, which transforms the institutions of a society and the behavior of the social actors in that society.[12] By the same token, the study of population trends is also conceptualized within the context of its determinants such as fertility, mortality and morbidity, nuptiality and migration. It must be emphasized quickly,

however, that the significance of the cultural, social, psychological, and institutional factors in determining these demographic variables is generally accepted.[13]

The theoretical notion being emphasized is that the interrelations between population and development are governed by a complex system of interconnections among a large number of factors and variables. It is not a simple cause and effect relationship. With particular reference to the views of African political elites (concerning the relationship between population and development), some questions ought to be posed. How do the political elites perceive the relationship between population and development? To what extent do these various perceptions encourage them to formulate either explicitly or implicitly pronatalist or antinatalist population policies? Are such population policies either an integral part of, or distinct entities from, an overall national development strategy?

The prevailing perceptions of most African political elites and policy-makers concerning the interconnections between population and development in Africa have been analyzed independently by Okediji and Ghansah:

> Africa is underpopulated and most African countries would benefit from having at least double their population. The low population densities of Africa compared with those in other areas of the world; the existence of extensive potential resources for development; the need to provide domestic markets for African products; the need for a large labor force for development; and the fact that nations such as Britain and Japan with less natural resources and smaller land areas than many African nations have been able to support larger populations and also maintain high standards of living are arguments which have been used as rationalizations against population control in Africa.[14]
>
> With regards to the high rates of population growth and large family size, there are those who are of the view that large family size is desirable and conforms to traditional expectations. In areas with extensive subsistence agriculture, children are still seen as indispensable assets in cultivation; therefore, the more children a person has the more help he will have in the fields and the greater his chances to augment his income. Another rationalization for raising large families in Africa is the prevalence of high rates of infant mortality, especially in the rural areas. Consequently, people raise many children as a kind of insurance against possible losses through infant mortality.[15]

In a concerted effort to cope with the problems of rapid population increase, some African governments have enunciated population policies favoring, among other action programs, family planning programs. There are other African countries in which the governments have not proclaimed a population policy, but may sponsor or support private birth-control programs. There is also a third type, or those countries in which government is interested in a policy of promoting population increase.

Type 1: Countries that Have Antinatalist Population Policies

For the purposes of this essay, a government is considered to have adopted an antinatalist policy when (1) it has incorporated birth-control programs into its plan for social and economic development; (2) a recognized and responsible government official proclaims such a policy; and (3) the activities within the country and the role of the government in such activities indicate that such a policy prevails.[16]

Of all African countries, only Ghana, Kenya, Botswana, Mauritius, Morocco, Tunisia, and United Arab Republic have explicit formal statements concerning the regulation of population growth rates from their current high levels so as to promote socio-economic development. Official family planning programs operate as a means of achieving the goal already differentiated. It must be added, however, that the stated demographic objectives of the population policies of these countries tend to vary according to past population trends, cultural and political peculiarities, and the available resources of particular governments.

Type 2: Countries that Have Not Proclaimed Official Population Policies But Support or Assist Family Planning Programs

A large percentage of African countries are classifiable under type 2. Advocates from some of these countries, especially those working in the area of health, have made several attempts to call the attention of policy-makers to the high rate of population increase in these countries and the role that family planning programs can play in regulating this high rate. On the other hand, some of the economic planners in these countries are anxiously seeking information about the nature of population structure and processes in their countries, and the impact of the latter on socio-economic development. Brief references will now be made to a few of these countries.

The Gambian government started to show some interest in the size and growth of its population when the results of the 1963 census were promulgated in 1965. A voluntary family planning association was inaugurated in 1968 with the moral support of the government. The reaction of the government to the recommendations of a Population Council mission that was commissioned to study the demographic and development situation in Gambia in 1969 has not yet been disclosed officially.

Some Togolese government officials as early as 1969 "did not appear to believe that the country would benefit from a population much larger than at present, but were concerned rather with population redistribution and general improvement in living standards. The government avoids the notion of seeking to fill up empty lands with a population boom. . . . Although the rate of population growth is not presently a matter of alarm, government planners do feel that rapid growth could hinder attempts to raise living standards. . . . Those thinking in terms of the educational realm are particularly cognizant of this."[17]

The government of Sierra Leone appears to have adopted a neutralist position on the question of the formulation of a population policy, particularly on the issue of governmental support of family planning programs. According to Thomas Dow, "While the government maintains an official position of . . . neutrality with regard to family planning, it allows the Planned Parenthood Association to provide services in public as well as private facilities . . . . The effect of existing family planning activities is negligible. Whether this will continue to be the case will depend largely on the government's policy. If it maintains its present position of neutrality, this will effectively preclude any significant increase in family planning in Sierra Leone. Conversely, if it endorses and financially supports family planning, substantial progress might be possible in the near future. At the moment, there is no indication that such a change is in the offing."[18]

The 1961-1965 Economic Development Plan of Dahomey contained important information on population and development. "The Dahomean population is growing rapidly, at 2.65% per year. . . . It is doubling every twenty-six years. . . . Half the population is massed in the South, in a coastal band representing 7% of the country's land area, which is heading towards a high density . . . The Departments of the South-East and the North-West find themselves grappling with formidable problems of local over-population. . . . 46% of the population is less than fifteen years of age, which

renders more acute the problems of food, education, and employment."[19]

Although the government of Dahomey has no population policy, it does give support to private activities in family planning.[20]

The government of Senegal does not have an officially promulgated population policy. However, some of the prominent economic planners are cognizant of the consequences of rapid population growth rates on social and economic development. A fertility survey was carried out in 1970-1971 to collect information for purposes of development planning.

Although the government has no formally declared population policy, it does support the activities of the voluntary family planning association. Family planning is defined as a health measure, and not as a means of population control.[21]

The case of Nigeria is rather unique, because the federal government has not yet proclaimed officially a population policy, although the present 1970-1974 National Development Plan devoted about three-quarters of a page to population matters. "Generally speaking, it can be said that Nigeria is going through a demographic transition phase of a rising birth rate and declining death rate, leading to a potentially high rate of population growth. Available evidence suggests an estimated population growth rate of 2.5% per annum. The youth-dependency ratio is high. Per capita income . . . is still low. So is the rate of urbanization. . . . During the plan period. the Government will pursue a qualitative population policy by integrating the various voluntary family planning schemes into the overall health and social welfare program of the country."[22]

Although Uganda has not yet promulgated an official population policy still the Second National Development Plan contained important information on the relationship between population growth and economic development. "Population pressure as such is not the critical problem as it is in many developing countries. However, the high growth rate does mean that a large proportion of the population is in the school age group, which makes the education burden much greater than in most wealthier countries, which experience lower population growth. It also means that Uganda must keep moving in order to stay in the same place. Growth in output and employment of nearly 3% per annum is necessary in order to maintain per capita standards and hence for increasing per capita income an even higher rate of growth has to be improved."[23]

Uganda, like other countries such as Liberia, Zambia, and Tanzania, allows private voluntary family planning associations to provide medical services to citizens who demand such services.

Type 3: Countries That Have Pronatalist Policies

Governments of African countries such as Congo (Brazzaville), Ivory Coast, Gabon, Cameroons, Upper Volta, Malawi, Madagascar, and Zambia are moré concerned with promoting population growth than decreasing it. In support of this policy, they have adopted measures such as family allowances, women's employment policies that include paid maternity leave and nursing breaks for mothers during office hours so that they can attend to their children, and prohibition of abortion and the sale of contraceptives.

It should be emphasized that the scope and intensity of the application of these measures vary in these pronatalist countries, because private family planning services are provided in some of them.

Assessment of Family Planning Programs in African Countries

An objective analyst cannot evaluate adequately family planning programs in African countries except in the context of the preceding issues that we have discussed; namely, a clarification of the concepts of population policy and development and the complex nature of the interconnections between them; the demographic structures and processes in Africa; and an appraisal of how political elites perceive the latter in relation to development planning.

What are the merits of family planning programs? In the words of Mauldin, although most *national* family planning programs have been adopted for economic reasons, family planning programs have also been adopted for reasons that are classified as follows:

A. Human Rights

1. As a basic human right.
2. Preserving options (freedom of choice).
3. Enhancing potentialities of the human personality.
4. To allow mothers more time for work and study.

B. Health

1. To reduce maternal mortality and morbidity through spacing and limitation of births.
2. To improve the mental health of women by the avoidance of unwanted pregnancies and births.
3. To reduce infant mortality and morbidity.
4. To improve child health through spacing and limitation of the total number of births.
5. To reduce the problem of the abandoned child.

C. Abortion

1. To reduce health risks associated with illegal abortions.
2. To reduce the total number of abortions for ethical reasons.

D. Family Structure

To strengthen the family through enabling the couple to have the number of children desired.

E. To reduce the rate of population growth in order to:

1. Increase economic employment.
2. Reduce unemployment.
3. Increase and improve education and educational participation.
4. Serve as an adjustment mechanism for migration/urbanization.
5. Combat environmental/ecological deterioration.
6. Improve the climate for peace.[24]

Despite these laudable reasons for the establishment of family planning programs in Africa, these programs have been under vigorous attack because of their political, cultural, and health implications.[25] First, political elites as well as intellectuals in most African countries question the motivations of the highly industrialized nations for actively pushing and financially supporting family planning programs in Africa. They further argue that the political rhetoric from these same nations, which always repeats the notion that "population explosion" is a world problem, ignores the fact that the continent of Africa is underpopulated (when, for instance, one considers the vast areas of land that are cultivable) in comparison to other continents. The critical issue, such argument continues, is that an average person in the highly industrialized countries of Europe and America consumes more than four times the resources of the earth in comparison to an average person in

the less industrialized nations. A more equitable distribution of these resources among all citizens of the world is more desirable than advocating and vigorously pushing programs of population control in the less industrialized countries.

Second, the critics of family planning programs in the less industrialized nations also argue that the fertility figures of these nations tend to be grossly exaggerated upwards in order to lend support to a neo-Malthusian solution of population growth in relation to underdevelopment in these nations. Contrary to this kind of simplistic solution, it is forcefully argued that the subfertility and high infant mortality rates in Africa still constitute very grave problems.

Third, the current "advertising approach" to family planning programs in Africa is obnoxious and renders the low-income groups vulnerable to deceit and exploitation. This same criticism applies to the use of incentives as coercive measures for low-income, nonliterate, and rurally based parents to subject themselves to all forms of family planning programs. It is in fact usually alleged that such coercive incentives undermine the fundamental human rights of each citizen.

It must be emphasized that some of these criticisms are debatable, and the concluding part of this essay will address itself in part to such a task.

Conclusion

Population policy and development planning are related in a complicated manner, and scholarship must identify and show these relationships. For some African countries, such as Rwanda, Burundi, Eastern Kivu, and Ituri in Congo Kinshasa, certain parts of Kenya, Uganda, and Ethiopia, the Malthusian problem of the balance between population and resources is becoming rather precarious. These areas are not only mountainous, with a high population density, but the continuous intensive cultivation of the land is becoming an impossibility. There is population pressure on the land. Obviously, a population policy for this area will include population redistribution, family planning programs, and implementation of all forms of social welfare and rural development schemes. On the other hand, it must be emphasized that the threshold of demographic survival has not yet been reached in some regions of Africa; and, in fact, the population density in some of the regions is too low to enhance an intensive cultivation of the land. The increase of population density in some of the rural areas within the African continent imposes a transformation in the techniques of production, which will surely contribute to agricultural development.[26] For example, in Ivory Coast, it has been calculated that as a result of the construction of the hydroelectric dam at Kossou, the increase of the population density in Baoulé (this is so because of the resettlement of the majority of 75,000 inhabitants displaced by flood) will transform the extensive coffee culture to an intensive one (i.e., an increase of 250 percent of the yield has been predicted, thus leading to a comprehensive program of rural transformation).[27] This program of rural development is consonant with a forward-looking population policy as well. The latter will include appropriate educational and training components, health services, population education, a system of social security, and so forth.

It is grossly erroneous to assume that population policy means just family planning. It would appear that part of the negative reactions of some African political elites to even a mention of the phrase "population problem" may be due to the confusion created in the literature by the tendency to use family planning synonymously with population policy. It has been demonstrated clearly in this discussion that population policy is broader in scope than family planning; and that population policy must be subsumed under an all-embracing program of national development.

It would appear that the merits of family planning programs as differentiated in this essay are generally acceptable; but the criticisms of such programs require further discussion. It is the responsibility of the highly industrialized nations to clarify their motivations for actively financing family planning programs in the less industrialized nations. On the other hand, African political elites should place greater emphasis on the *quality* of their population rather than on *quantity*. Such an approach will obviously give impetus in the right direction to development planning. The "advertising approach" to family planning programs in Africa should be completely abandoned. In other words, family planning programs in Africa should become part of a movement for social and economic transformation.[28]

Finally, social scientists and demographers should take a closer look at the socioeconomic, cultural, and environmental correlates of subfertility in Africa. A thorough investigation of this demographic problem will reorient policy suggestions in the literature, which up to now appears to be dominated by a neo-Malthusian approach.

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POPULATION/FAMILY PLANNING PROGRAMS IN LATIN AMERICA—PROBLEMS AND PROSPECTS

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The need in Latin America for a population program tailored to suit our needs is the subject of this paper. It is also concerned with the obstacles and resistance demographers are encountering; in particular, the ignorance and irrationality of vast masses of our people who still refuse to see population as a problem, and also the manner in which aid is given to emergent nations—a manner that has convinced many that birth control is nothing but a new colonial snare.

I am neither an expert demographer nor a family planner, but, being a Latino, I am anxious to channel my activities toward the discovery of a solution that takes into consideration the true nature of Latin America, its socioeconomic structure, the idiosyncrasies of my country and its people.

The Contrasts of Latin America

It is a common mistake to think of Latin America as a single geographic whole. In the first place, it is made up of 22 individualistic nations, each containing extremely diverse ethnic and cultural groups. A number of factors have imposed on it a superficial unity: chiefly, a varied pre-Conquest way of life which was followed by 300 years as a Spanish colony and then by a period of economic dependence.

A tremendous mingling of races and a clash of cultures have led to a biocultural synthesis that is still in progress. The development process has manifested violently contrasting patterns. We find positive factors like democracy, with a real participation of the people, contrasting with intermittent regression to authoritarianism. Cultural freedom and brilliance are to be found side by side with obscurantism; the traditional strength and structure of the family with common law unions in which illegitimate children are abandoned to live as beggars and delinquents; economic development of great sophistication with vegetating masses; virulent nationalism with solid regionalism; and a fatalistic, pseudo-religiosity with free choice. There is also the impact of Western civilization on our people to be considered. A diffusion of Western arts, sciences, and technology stimulated a heterogeneous and at times contradictory cultural production, seen in the plastic, artistic, musical, literary, and scientific creative works of Latin America.

Of all the regions in process of development, Latin America has the highest average per capita income, and is the region in which it has continued to rise at a higher rate than in any of the other emergent areas.

It is this very diversity of national characteristics, these contrasts, that has made the task of demographic research peculiarly difficult, and, as a consequence, it is difficult too to define well-formulated policies.

A Demographic Profile of Latin America

"At the turn of the century the total population of Latin America amounted to some 63 millions, a figure well below the present day population of Brazil. At current rates of increase, Latin America will multiply ten times by the end of the century, and rival the current population of China."[1]

With a population of 300 million in 1973, Latin America has all the demographic characteristics of the developing countries. General mortality rates have been declining consistently, and in some places they are even lower than those of highly developed countries. Unfortunately, birthrates have not followed the same trends, the average being over two and a half times higher than those of developed countries. "... in contrast to mortality, no Latin American country has comparable programs for dealing with fertility. ..."[2] This imbalance between births and deaths has produced the highest growth rate in the world, with a population doubling itself every 25 years.

The world growth rate of about 2 percent is topped by that of the Latin American countries, where it is approximately 3 percent. It is the high growth rate of the population of Latin America, rather than its size or density, that is causing very serious problems, and it is most necessary to emphasize this fact since Latin America, with only 7 percent of the world's population, is not densely populated. Only El Salvador, Haiti, and the Dominican Republic can be regarded as relatively overpopulated. It is ignorance of these facts that has led to a faulty grasp of the problem and given rise to a feeling that it is time our vast spaces of land were filled in.

The population structure is lopsidedly young, and the high percentage of children under 15 has brought about a high dependency rate, with all its economic implications. Even so, the infant mortality rate is three times the average prevailing in developed countries. The decline achieved in 1969 fell 70 percent below the target proposed by the Latin American presidents when they met at Punta del Este. And it is the thousands of our children dying daily of easily preventable causes who have given rise to the expression "luxury deaths."

We are all agreed that population and health are closely interrelated, a fact thoroughly discussed at special meetings,[3] and that the development process, coupled with the activities of health programs, could easily bring about changes in the levels and trends of demographic variables affecting the growth, the size, and structure of the population. The interplay of the two, now generally ac-

cepted by the medical profession, does, however, retain controversial areas where it appears illogical to work for planned families, while infant mortality rates continue so high. Nonetheless, this is perfectly logical to those who cannot forget the very high rate of induced abortions, one of the principal causes of mortality and morbidity in the countries of Latin America.

Demographic studies today allow us to see the importance of two groups: those under 15 and women of reproductive age. These studies show that six out of ten Latin Americans have to be covered by comprehensive maternal and child welfare programs, which include family planning. Facts of this nature will have to be considered by ministries of health in programming their activities, and by universities in the qualitative and quantitative building up of health teams.

The most significant demographic fact, besides the accelerated population growth rate, is the rural-urban migration, which is causing serious economic, administrative, and health problems. To this should be added the fact that fertility continues, apparently, to rise in some countries. Unfortunately, the rate of this migration is higher in Latin America than in developed countries; higher, too, than the rate at which we are modernizing ourselves and our industries.

In a region of very uneven income distribution, the average per capita income for Latin America is $352 a year, and apart from economic factors, the main causes of this unevenness are an accelerated population growth, the small participation of women in industry, and the underemployment and unemployment resulting from migration. Within this overall picture, there exist certain very telling differences among countries that characterize the problem. For example, most of these countries have high birthrates, yet those of Argentina and Uruguay are as low as those for developed countries. Curiously enough, both of these have the lowest per capita GNP growth rate of any in Latin America; for while the growth rates for other countries have been about 5 percent, in these two they have remained steady at 3 percent. Nevertheless, both have achieved extremely satisfactory figures in education and health and nutrition, a sign of a most favorable social development.

On the other hand, Brazil, Mexico, and Venezuela, with some of the world's highest economic growth rates, and faced with extremely rapid population growth, have been unable to achieve anything like the social development of Argentina and Uruguay.

Other comparisons, too, can be made using different indicators of social and economic development. Rural-urban migration, for example, is a process that, in Latin America, started in Argentina and Uruguay well ahead of the other countries and is a process that became absorbed into the societal fabric years ago. In the other countries this process is still active.

Perhaps this analysis could lead some to apply tentative conclusions to an analysis of Latin America, especially to Brazil, Mexico, and Venezuela:

1. A high demographic growth rate does not appear to have held up economic development.
2. Neither has economic development slowed down demographic growth rate or impeded the search for a solution to social problems.

However, the stark fact remains that when so much of the economic growth is absorbed by population growth, what is left over is insufficient to promote social development.

> . . . it is a well known fact that development is generated by the economic surplus accumulated by society. But this surplus, like the frustrations of modern Tantalus, has been devoured by the demographic excess. Neither health, nor education, nor even agricultural production, have been able to keep up in the uneven race they have been forced to run with an explosive population growth.[4]

Only in Argentina and Uruguay, with less population pressure, more recently in Cuba, and, during the last 20 years, in Chile (in Cuba and Chile fundamental structural changes have been carried out) have the social services been able to reach satisfactory levels of coverage.

It must be emphasized that in studying Latin America, the connections among economic growth, population growth, and social development will have to be examined with much greater care than they have received to date. In this respect, modern research techniques could make effective short-term contributions. Various institutions, national and international, as important as the Colegio de México, CELADE, and ILO, are already developing interesting operational research, based on mathematical models.

A Lack of Demographic Awareness

The Status of Demography

Less than ten years ago an outstanding European demographer said:

> What we have agreed to call the population explosion has taken place in a world wherein demography is completely unknown or totally disregarded, excluded from the universities, despised by economists, and ignored by the "common man." This all-important science has been at a stand-still for at least two centuries in a semi-barbarous condition.[5]

If this is true of the world as a whole, how much truer it is of Latin America. Until a short time ago, demography, as an independent discipline, was not taught anywhere. And even today, it is excluded from the curriculum of all but a few of our universities, where it is usually taught badly, superficially, and by people with little training; in medical schools, basic demography is only disseminated from a limited viewpoint.

Not so long ago, very few professional people (including economists, sociologists, and politicians, even those with some knowledge of demography) fully realized the dynamic role that the population will have to play if it is to bring about the global changes that will enable emergent societies to achieve a welfare economy and to raise the quality of their communal lives.

The Problem from the Social Angle

In most Latin American countries, only a tiny handful of people have access to objective information on the biological and socioeconomic changes connected with population dynamics. Certainly the vast majority, living out their marginal lives at subsistence levels, can hardly be expected to visualize the immensity of the problem, much less to make any contribution to its solution. For these very poor, illiterate people can see no connection between having fewer children and an improvement in the quality of their lives.

In the words of an ex-president of Colombia, Dr. Carlos Lleras Restrepo, on the way this problem affects people at various levels of society:

> This inequality [of opportunity] to which I have referred, is reflected in the motives affecting a sense of responsibility in family planning. Among the upper and middle classes one finds many examples of people taking this responsibility seriously, but very seldom among the working class, though this is beginning to appear even here today. Regarded from the angle of social mobility, what is the result of this irresponsibility? Without question an increase in the structural im-

balance of each society. Upper class families have a much easier access to education and to the health services, whereas it is daily becoming more difficult to give the poor the necessary health services and educational opportunities, simply because they are too numerous and immediately outgrow whatever is provided for them.[6]

Still more serious is the fact that only very few schoolchildren receive any population education, leading to an ignorance that will most certainly make itself felt in the years to come, should they ever enter a university or when they become adult members of society.

All this leads to the conclusion that if in Latin America as a whole there is little awareness of the size and implications of the population problem, it is even truer that the people lack a clear understanding of the ways in which it could be approached. Although some studies have shown a recognized need for limiting or spacing out births, this goes no farther than good intentions, and the need remains on the surface of sensitivity, never effecting any real change in sociocultural behavior, much less in sexual behavior, in a way that enables us to foresee rapid demographic transition similar to that which occurred in developed countries. Only where advanced cultural patterns have become widespread at a high level, as in the case of Argentina and Uruguay, has there been possible a lowering of the birthrate, though as yet no empirical research has been able to establish the cause and effect relationship.

This situation, with all its shades of difference in a region so varied in culture and language, has convinced us that within the great problem sparked by the demographic irrationality of Latin America, nothing is more likely to contribute to its solution than knowledge—using "knowledge" in its widest sense to include a rigorous examination of the facts, disseminating the results of research, and the communication of objective information.

Obviously an intellectual approach of this kind cannot exclude structural elements as substantial as political, economic, and religious factors, or those other factors known internationally as "power relationships," which so greatly influence issues with high political contents.

Family Planning and Population Policies

Studies carried out in Latin America by national and foreign research teams have shown that among members of the upper and middle classes there exists a general and individual awareness of the need for family planning. Nevertheless, awareness has nowhere been translated into a concrete consciousness that senses the advisability or the need to face the population problem. Certainly, nowhere has it settled into the formulation of explicit population policies or produced the design of large-scale family planning programs. This situation, at first glance apparently contradictory, appears, on closer examination, perfectly logical when one comes face to face with the whole constellation of shortcomings that characterizes the underdevelopment of the region as a whole and the countries individually.[7]

Yaropolk Guzevaty, of the USSR Academy of Sciences, has said:

> . . . it is advisable to take steps to control births in those developing countries with an excessive population growth, and necessary in many cases when one considers the development of the country as a whole; but control only attenuates the social problem, without solving it. Lowering the birth rate will not in itself free developing countries from the need to search vigorously for means to achieve agrarian reform, to modernize industry and agricultural production, and to raise the level of education and culture.[8]

The complexity of this problem arises from a variety of elements. In the first place, family planning services operate only in a very limited individual social context, which could be described as strictly "medical" or "biological," using these words in their most limited scientific connotation. The rationales for providing these services are to improve the mother's health and to avoid unwanted children and/or abortions. Even though family planning activities are conducted within health programs, they are still surrounded by a political atmosphere clearly hostile to their advancement. This inevitably limits the scope of their programs and makes their evaluation poor, both quantitatively and qualitatively.[9]

The setting up of integral population policies, however, should be preceded by a careful analysis of the whole context—economic, social, political, religious, and legal—of each country, to be followed by coordinated activity in such areas as housing, education, health, and nutrition. If the aim is to achieve a demographic rationale,[10] it is only reasonable to suppose that this will be achieved by simultaneous action on every part of society.

If the various components of a development plan are consonant with the overall targets of a population policy, a demographic rationale will be achieved, provided those measures are adopted that reflect the social and political feelings about population in a way that leads to action and development.

This position of overall functional change, which has the support of radical leftist groups, is outlined by Stycos in these words:

> That high fertility that has in fact persisted for decades in Latin American countries, with rapidly declining mortality rates, lends some empirical evidence to the argument that basic socio-economic changes are necessary preconditions for fertility decline.[11]

The adherence of the majority of social scientists to this concept must be borne in mind when evaluating the reality of the situation into which the population programs are to be launched. There is a desire of some of the more educated groups in Latin America—including liberal politicians, humanists, and scientists, each in his own country deeply interested in the problem—to develop a genuine population awareness, but a series of real obstacles, factual and ideological, have prevented the realization of this wish. Of the many obstacles, perhaps the greatest is ignorance; the absence within each country of anything like an awareness that there is such a thing as a population problem. How in such an atmosphere can a demographic policy be formulated and activated?

We must emphasize the need to tailor population policies to suit the general political atmosphere. Ideally, family planning programs, whether part of a government policy or not, should develop within the national framework, while remaining free of every shade of political interference.

Criticisms of Population Programs

Many factors, interwoven from contradictory ideologies, have built up into uneven resistance to population programs. Subjectively, the attitude of suspicion and distrust that prevails in many quarters owes much to the fact that of all the arguments used in favor of population programs, very few are homemade; most come from abroad.

There is a tendency to set up programs that have been successful elsewhere without adjusting them to the local conditions of countries that have for centuries lived under colonial domination. These countries, which today feel that they are the objects of political and economic discrimination, tend to view with suspicion most of the ideas that come from the great lands where the power lies, a feeling that is bolstered by ideological reasoning, often

highly subjective, superficial, and misinformed. But, to quote T. G. Sanders, "they also reflect an extraordinary insight into the paternalism and lack of sensitivity which have traditionally governed programs initiated by the U.S. in Latin America."[12]

Measham, examining this against its historical background, ha stated: "A frequently forgotten fact is that, in large measure, bilateral associations between countries were until very recently either colonialist, exploitative or both. Bilateral assistance which was not primarily an expression of foreign policy and/or in pursuit of domestic, commercial interests, is largely a post World War II phenomenon." Then, examining the situation of countries emerging from political colonialism, Measham reaches conclusions that are equally valid for all Latin American countries, since none are really free, but "they still, to a greater or lesser extent, suffer from the after-effects of colonialism, and exploitation from within and without."[13]

Added to this view of the foreign policy of the great powers, the absence of a native demographic awareness appears to strengthen the importance of these feelings. Spokesmen of leftist nationalistic groups and of masses, not necessarily of the left, yet identified with populist causes, use the same arguments for the same purposes, although with varying emphases. Listening to them, one catches a general consensus polarizing about the "state of dependence" that contributes so powerfully to keeping most countries of Latin America from overcoming their backwardness. One comes to realize that for many people here, family planning is just a new trick, the latest form of oppression, a new kind of colonial exploitation.

Both Stycos[14] and Sanders[15] have analyzed the philosophy of certain highly vocal exponents of this Latin American nationalism, especially those who maintain that family planning is determined to put a brake on the growth of the population of Latin America (and especially of Brazil) and that the drive behind it comes from abroad. These nationalists feel that our peoples, with their mixed blood, are potentially strong, ready to mix freely with all the other peoples of the world and to identify easily with them. For them, family planning is an attempt to age a vigorous young race. They point out that the very pressures of population create the revolutionary preconditions essential to social change, which it is the purpose of family planning to arrest. They argue that those promoting birth control will fail in Latin America because the middle-class consumer values they are peddling so paternalistically are totally irrelevant to the people of Latin America, and only a few small middle-class groups are prepared to accept these values.

Groups from the conservative right, traditionally Catholic, and sometimes even the Church itself, base their opposition to population programs, even those reduced to mere family planning, on morality. It should be noted, however, that the opposition of the Church has turned out to be less formidable and decisive than was at first expected. The Church appears to be thoughtfully continuing to wait and see, while maintaining its own interpretation of social improvement.

Some important sections of society hold a view that the demographic problem is the result of social backwardness, and that a population transition will inevitably take place in each country that modernizes itself. As examples, they put forward Northern Europe and the United States. Population growth rates will, they say, then be compatible with progressive, well-balanced social welfare. This belief in the recurrence of identical historical situations, while leaving the solution of concrete problems very much in the lap of Providence, forces man to submit to all the uncertainties the future may bring.

Whenever we find a position of outright criticism to population programs, we see an incapacity to grasp the magnitude of the problem in all its gravity, or the detachment to face it. Stycos, referring to the results of recent research, says:

> In sum the available evidence from Latin American studies of leadership indicates: 1) that a large proportion are unconvinced that a population problem exists in their country; indeed many believe that rapid growth is needed; 2) most favor family planning programs, as opposed to population control programs, but even here substantial minorities are against such programs; 3) there is some evidence that the upper classes are more conservative than the lower classes.[16]

Role and Image of Foreign Aid

The part played by foreign aid within the whole development context merits careful consideration, and this is especially true of the aid provided for population programs, where the participation of governmental and even of private agencies becomes particularly controversial.

Foreign aid is rightly looked upon as, potentially, one of the most powerful tools of modern imperialism, a feeling that has grown stronger, in these parts, with the disappearance of Kennedy's concept of the Alliance for Progress, to be replaced by an apparently restricted, paternalistic approach to social improvements, limiting itself to preconceived plans and formulae.

Although well-handled foreign aid could be of the greatest benefit, it has served to raise the misgivings and suspicions of the Third World countries that have grown up with it. These feelings have been expressed by authoritative spokesmen of the developing countries, as well as by intellectuals in countries providing aid, including the United States. Everett Hagen, professor of economics at MIT, has put it this way: "After the Second World War low income countries received the impression that the U.S. had scant respect for their way of life, and was only interested in manipulating them for its own ends."[17]

The fact that aid programs are not only sponsored by governmental agencies, but are often seen as having a political slant, has caused suspicions that not even the multilateral institutions through which they are now channeled have been able to allay. Even the image of academic and philanthropic institutions, such as private foundations, is not free of the tarnish of "ideological contamination." This can be avoided as donors recognize the hopes and authentic values of potential receivers, even when, as so often happens, aid is required to bring these very hopes and values to the surface.

A refusal to accept foreign aid in the field of population has led to the rejection of funds for programs having nothing to do with it. This rejection is inseparable from the overall concept of "dependence" on outside help, a concept much heard today in the world of Latin American scientists and politicians.[18] University authorities find it hard to understand why it should be so difficult to get, for instance, a medical education program financed by aid donors, when funds are so lightly granted to family planning. This imbalance often means that educational institutions, in which, according to ideas regarding modernization, the greater part of aid should be concentrated, end up by rejecting even adequately financed population programs.

True foreign aid is that which, with no strings attached, aims at reinforcing and multiplying native values, leadership, and potentialities. This kind of aid will always be readily accepted and well-used.

A passing reference should be made to the disastrous influence

of the bureaucratic machinery in donor agencies, especially in governmental institutions. While top management has a wide and generous approach to our problems, the attitude of the middle echelons is only too often rigid and narrow. ("I go by the book.") Obviously a balance must be maintained between a discerning flexibility and cold administrative efficiency. Careful supervision, however, should make it possible to prevent an obsessive "sticking to the rules" from blocking the true purpose of aid.

I have tried not to prejudge positions or their theoretical soundness, but by analyzing different points of view and reactions to concrete situations, I think two provisional conclusions can be reached. There is, in this field, a controversial ideological factor, based on ignorance of the facts or a lack of sound research into their interplay with each other. The other important problem is connected to the manner in which aid is granted to population programs for Latin American countries.

The Road to Reason

Family planning in Latin America has achieved positive results, and my purpose is in no way to overlook this. But this does seem to be the moment to coordinate the efforts of those seriously concerned with the population problem: those who approach it humanistically. Coordination should be achieved at an international as well as national level, on the following two points:

1. Massive efforts to insure the expansion of knowledge and the scientific understanding of the population problem
2. A change in the nature of foreign aid

The first could be brought about largely by intensifying research and teaching, principally in the universities. CELADE has recognized that the medical schools have been the driving force behind demographic research in Latin America, and that this has not been the case either in Europe or in the United States.[19] As long ago as 1969, Dr. John A. D. Cooper, president of the AAMC, pointed out the challenge facing those members of medical faculties doing research into the characteristics of population growth: "This is probably the greatest challenge ever levelled at them for it cuts across all borders and boundaries. It is not just a clinical or biological problem. It is also social, political, economic and moral."[20]

I feel, too, that there is a need to augment the support being given to biosocial research. This much was admitted at the preliminary discussions held during the 1972 International Development Conference: there is an urgent need to establish a comprehensive, long-term research program for social sciences in the hope of reaching a better understanding of the problem, and getting better proposals for programs. Continued dependence on improvised research is out of the question.

A conference called by the Council on Higher Education in American Republics (CHEAR) in 1966, to define the position of demography among scientific disciplines within the academic structure, came to the same conclusion. The need was clearly established to drive ahead with teaching and research in demography as it relates to medicine, sociology, and economics. Those taking part in the conference felt that this would be the best way to obtain the desired information and to define most clearly the implications of population dynamics within an interdisciplinary framework.[21]

Yet, strange to say, some of the strongest resistance to family planning programs has come from the universities themselves, whose medical schools, at the same time, can show concrete achievements in this field and never cease pressing for increased sound objective teaching on population problems. Education is, potentially, our most important multiplier, and without it there would be little hope of effecting changes in behavior patterns, and more especially in reproductive patterns.

Personally, I am convinced that if we could set off (and here I use the words of the authors of *The Limits to Growth*)[22] a Copernican revolution in the minds of people, the impact of service programs would be immense. But if teaching programs outside this field receive reduced support, then family planning will be even more vulnerable and will become the target of attacks of growing virulence from its critics.

As for foreign aid, perhaps in the future it may come to be considered less a gift from a rich nation to a poor neighbor to start development programs in fields previously outlined by the donor, than a kind of partnership in which the interests of the recipients are of overriding importance, not only at the operational but at the decision-making level.

It is certain that little of what has been done could have been achieved without foreign aid. However, I feel that it will never be accepted as fully as it deserves to be until the donor agencies offer it for comprehensive, carefully selected areas of activity and until the receiving countries accept it freely for programs chosen and designed by them, for themselves. We cannot sufficiently emphasize the danger of "offering" packaged programs without consulting the institutions interested in them, or charged with their execution. It is true, however, that agencies, particularly private agencies, granting foreign aid, have during the last few years tended to allow the receiving countries to take a hand in working up programs, and in choosing those best suited to their needs. To this end, regional offices have been set up, where experts from many countries work together at the task of selecting the priorities to be applied to aid programs. At a higher level, advisers to directive bodies are placed on committees as members. Even citizens of nations receiving foreign aid have been seen on these same boards. Moreover, these agencies have given spiritual, as well as financial, support to new insights turned up by research, especially those concerned with social development, going so far as to back the efforts of leaders and intellectuals whose modern and progressive positions have sometimes provoked resistance in their own home countries.

To conclude, let me underline the main points put forward by this paper:

1. Even at the risk of poaching on the preserves of other disciplines, there must be an intensification of demographic research that regards the population problem as a single whole, and seeks objective knowledge of the facts. This implies a strengthening of the statistical infrastructure, to provide a steady flow of systematized information—long accepted as the prerequisite for studies or decision-making in this field.

At the same time, support must be forthcoming for special branches of research, particularly those of an interdisciplinary nature, which can observe demographic facts in a new light, and may succeed in seeing a fresh interplay between them.

2. To start population education at various levels, formally and informally; to make people aware of the facts of population dynamics, as clearly defined and as rationally as possible, but particularly to open their eyes to its effects in their own daily lives. To achieve this, special attention should be paid to such points as the development and training of a teaching staff, at long last wholly in Latin American institutions; to make reading and teaching material easily available; and to ensure that the contents are effective by carefully preparing it for various levels and by actively developing new and effective methods of instruction.

3. Family planning programs should be encouraged to find their way back into their scientific context, and eschew all political overtones that unfortunately in the past have been allowed to color them.

4. To revise and readjust the concepts that have previously guided programs of external aid, and the procedures for granting it. This means revising and eliminating the ideas and mistakes that have crept into programs of external aid: the so-called impositional factors, the impatience and faulty interpretation that seek to achieve results while overlooking the true state of things and failing to insist on careful studies and research.

Adequate mechanisms should be set up to discover and, within the plans for foreign aid, to take into consideration the interests of the recipients, even if this implies a fair share in the discussions leading up to joint decision-making.

Also, foreign aid for population programs should be granted in a friendly atmosphere of give and take, which bears in mind other fields within the cultural and socioeconomic framework that are also in need of support.

I only hope that the way I see things in Latin America, and the conclusions I have drawn, will be received as a contribution to the strengthening of our partnership, and to the mutual respect between our peoples, through which, finally, we shall raise the quality of individual lives and societies.

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EMERGING ISSUES IN POPULATION POLICY AND POPULATION PROGRAM ASSISTANCE

Mercedes B. Concepción

The difficulties encountered in national family planning programs and the constraints, financial or otherwise, that are responsible for them are some of the problems to be considered by this conference. The aim of this paper, the basis of which has been culled from interviews with social scientists working in various Asian countries, is not to provide definitive answers. Rather, it lists "discussion points" for consideration by the Bellagio III Population Conference, and seeks to broaden the scope from family planning programs alone to population programs.

An Overview

The factual framework within which this paper is placed has perhaps been best described by Dorothy Nortman in the September, 1972 edition of *Population and Family Planning Programs: A Factbook,* published by the Population Council. Here are some brief extracts:

According to United Nations' estimates, the Asian population (East Asia excluded) will increase by 2.81 percent between 1970 and 1975. Compare this with 2.75 percent recorded for 1965–1970.

These estimates are cited to show that the population growth rate in Asia is still increasing. This may seem paradoxical, since fertility has been declining. The growth rate continues to increase, however, because the death rate is dropping faster, both relatively and absolutely, than the birthrate. There is potential for further reduction of the death rate, and hence for still higher growth rates. Life expectancy at birth in the countries of Asia (excluding East Asia) is estimated at 51.8 years, in contrast with the 71.2 years in the more developed countries (for both sexes combined, for the period 1970–1975). The real potential for growth, however, lies less in further mortality reductions than in the present age structure of the region's population. It is a structure that ensures continued growth well into the next century.

Even if Asian couples were to start to reproduce immediately only to the extent necessary to replace themselves (at a net reproduction rate of 1), population would continue to grow. There is a relatively high proportion of persons currently in and entering the reproductive ages. They are likely to produce more births than the total deaths that would occur among the population. Even at replacement rates, therefore, population would not stabilize until the age structure stabilizes.

Fertility in Asia outside of East Asia is presently nearly three times the replacement level. Thus, prospects of an immediate drop to replacement are virtually nil. If this level could be reached by the turn of the century, the population in this part of the globe would increase from the present 2.2 billion to 5.5 billion in the year 2050.

With a moderate but nonetheless meaningful fertility decline that brought about a net reproduction rate of 1 by about the year 2050, the population of Asia would be around 9.9 billion, 4.5 times what it is now.

This view of Asia reflects essentially the youthful age structure of its populations and the levels of fertility that are well above those needed for replacement. By contrast, in the economically advanced countries, fertility is about 20 percent above replacement, and even below replacement in a few countries. Also, the age structure is characterized by a smaller proportion of persons in the peak childbearing years. The present demographic situation is unique. Given a 2.3 percent population growth rate in Asia, population is expected to double in 30 years.

There are also major qualitative distinctions among the countries that grew rapidly in the pre-World War II era and those with rapid population growth today. In the past, population growth and industrialization went hand in hand; today, population growth rates are two to four times higher than those that prevailed in Europe during its comparable period of development. As a group, the Asian countries are growing at 2.3 percent per year, the more developed countries at 1 percent per year.

Regional Differences

Differences in growth rate by subregion are striking. Southwest and Southeast Asia are the fastest-growing subregions. Their birthrates are not any higher than those of the other developing areas in Asia, except East Asia, but their death rates are lower. The United Nations estimates that the birthrate is about 44 per thousand on the average and the death rate between 15 and and 16 per thousand. Thus, the resultant annual population growth rate is about 2.8 percent per year. Should this trend continue, the population in these two subregions will double in 25 years.

These rates are historically unprecedented for any major area for any protracted period. To appreciate this, it should be noted that in their demographic transition from high to low birth and death rates, the countries of Europe rarely grew by as much as 1 percent per year. Even at this rate, population pressure built up, and much of it was released through emigration, a safety valve no longer available today.

Incomes

Per capita income, as an indicator of economic development, has many limitations. In spite of these limitations, it is a useful measure of development because it is highly correlated with demographic, social, and technological, as well as economic, phenomena.

In the developed world, per capita income (gross national product for 1970 in U.S. dollars) is over $3,000. It is less than $300 in Asia.

Moreover, the gap is growing wider. From 1963 to 1970, real per capita income (gross domestic product) increased 29 percent in the developed areas compared with 16 percent in Asia (excluding Japan). With Japan's contribution, the figure would increase to 44. The annual average gain would be 3.6 percent from the very much higher base in the developed countries as compared with 2 percent in Asian countries outside of Japan.

Other Indices

The rates of industrial and agricultural growth of the Asian region seem satisfactory. They exceeded, to some extent, the growth rates of industry and agriculture in the more developed areas in the period 1963 to 1970. It should be noted, however, that these are gains in aggregate, not per capita, product.

The average annual 8.9 percent increase in industrial production in Asia, excluding Israel and Japan (71 percent overall in the period 1963 to 1970), is impressive, but the gain is from a base level that is low, in absolute terms and relative to the more developed countries.

To eliminate the differences in aggregate industrial production between the more developed regions and Asia at their respective rates of increase would take about 150 years. This is not to suggest that such rates can or will persist for this duration of time.

Daily Bread

The gains in aggregate food production are sizable until one looks at the per capita figures. These show that for Asia as a whole (excluding China), the 33 percent increase in total production in 1969–1971 in comparison to 10 years earlier represented a gain of only 3 percent per capita.

In the more developed countries, moreover, where most people were adequately nourished in the base year, per capita food production in 1969–1971 was 16 percent above the level that prevailed a decade earlier.

Power

For international comparisons, per capita energy consumption may be the best indicator of modernization. Modern technology requires inanimate energy. Generally, it also can be measured with greater precision than can other indicators.

Difference by development status is large: in 1970, the more developed regions consumed, per person, more than 15 times as much energy as the Asian regions, excluding Israel and Japan (5,495 kilograms per capita versus 366 kilograms).

To reduce these differences, it is clear that even with moderate or low rates of population growth, the developing countries of Asia face serious problems of economic development.

Policies

Countries in Asia can be classified into three categories with regard to government position on population growth and family planning practice.

1. Official policy to reduce the population growth rate
2. Official support of family planning activities for other than demographic reasons
3. Neither an official population policy nor official support of family planning programs

By 1972, 91 percent of the people in Asia lived in countries whose governments had a policy to limit population growth or supported family planning programs for other than demographic reasons. Among the 15 nations whose governments are committed to a reduction in the population growth rate are the large ones (Bangladesh, China, India, Indonesia, and Pakistan) and the medium-and smaller-sized countries (Iran, Malaysia, Nepal, the Philippines, Singapore, South Korea, Sri Lanka, Taiwan, Thailand, and Turkey).

In general, when Asian governments do consider the population question, the official pronouncements usually encompass an antinatalist policy and a family planning program.

Issues on the Horizon

For purposes of this paper, a number of issues are discussed. Some are problems that the social scientists interviewed[1] believe will loom large in the years ahead and some are questions that were raised in the past but have not been given enough emphasis.

First, what can be done, in terms of policy and action, to manage population growth (obviously, it will continue at a relatively swift pace) in such a way that it does not serve as an obstruction to efforts to maintain and improve inadequate levels of living?

This is foremost in the minds of many Asian leaders at the present time. And, of course, it is emphasized in the Charter of the United Nations and is implemented in the various aid programs of the United Nations Fund for Population Activities, bilateral arrangements, and so forth. By and large, there is now widespread recognition of the problem of sheer numbers.

But the years ahead will probably see more debates on what could be called the "relationship of numbers." The population policies of most countries include adoption of family planning programs. They presuppose that rapid population growth impedes social and economic development. They also assume that low fertility and low growth are the only population factors prerequisite for development.

However, there is growing recognition that there is a lack of knowledge of just how strong a hindrance is posed by population growth. "We really do not understand this as clearly as we often pretend," was the remark of one demographer. The need in the years ahead will be for much more research and much more thought because this is a very complex issue dealing with the whole structure of social and economic development, the transition of societies from traditional to modern.

There is also a related development: the feeling today that the "old emotional issues" talked about earlier—e.g., the likelihood of imminent famine and rapid population growth as an absolute obstacle to development—have been pushed much too far. Thus, there is a reaction against them. We simply have to come to grips much more with the details of relationships posed by population growth if population programs are to be effective.

An issue that has not been getting the attention that it merits (considering its contribution to human misery during the rest of this century) is the problem arising from population concentration, urbanization, and internal migration streams.

Policies and programs to alleviate human misery that will result from the great flood of migrants into heavily congested cities and the resulting urban crisis can be reasonably expected to intensify over the next five years or so. These are matters that governments—and for that matter the international agencies—have not yet really grappled with, at least not to the extent that has been seen in the case of excessive population growth rates, of high birth and death rates.

For the poorer countries of Asia, the question of population distribution and urbanization is largely, at the moment, a matter of adjusting to hard facts. It is clear that over the next 10 or 20 years rapid growth of population will persist. The rise in the pro-

portion of the population living in urban areas will continue, but what lies behind it will be equally significant: simultaneous growth in the rural areas.

The cities are thus growing quite rapidly—often, for the big cities, at 5 or 6 percent a year. This could mean a doubling of city populations in less than 15 years. The history of Western countries is different. Back at the time when their cities were growing faster, rural population growth had just about stopped, and the cities were absorbing the increases. But this is not true for most of Asia. In the next two decades, both city and rural populations will still be increasing.

Inevitably, the continued growth of rural populations will pose considerable problems in the more densely settled areas like Korea, Taiwan and, more particularly, Java, where population densities are already extremely high. The tinderboxes of tomorrow's conflicts will be these areas and their congested cities.

This simultaneous growth calls for innovative policies and programs in the years ahead. Some suggest trying to keep people out of the cities. In Indonesia, for instance, they stop people from going to Jakarta, unless they have a definite appointment. These policies, while politically attractive, are difficult to implement. And if there is a big urban mass of unemployed, it becomes politically dangerous. There will be a critical need to formulate positive development policies for the cities. These include issues of how to make the cities livable, despite the low incomes, the low tax base, inflation, the inadequate sewage, water supply, and so on. Programs to help migrants adjust to the tremendous differences in urban life, as distinguished from life in the rural areas from which they may have come, are also essential. Such fundamental things as living by a clock, living by a calendar, and living in a monetary economy have to be learned. People today flock into Asian cities without preparation for even these basics.

True, there have been a number of conferences, regional seminars, and the like, under the auspices of the United Nations and its specialized agencies, on these problems. Programs have been outlined, but nothing has been done by governments anywhere to attempt to deal frontally with these problems with, say, the same kinds of "inputs" now available for family planning.

In the Asian setting, Japan will offer an insight into the kind of problems East and Southeast Asian nations may face as they industrialize. The Japanese problem of population concentrations in Tokyo, Osaka, and Nagoya is only one aspect of the crisis. It is significant to note that Prime Minister Tanaka, in his book *Remodeling the Japanese Archipelago*, looks at Japan's migration streams into the Tokyo, Osaka, and Nagoya megalopolis and notes that most of those who flock to the city are young couples and there is no indication of a return migration stream.

A concomitant problem is the drastic change in the age composition of the Japanese population. This is a problem that no other country has experienced before. For instance, in the decade of the seventies, the 15-to-29-year-old age group will decrease by 4 million in just a single decade. During the same decade, the 30-to-44-year-olds will increase by 4 million. And those aged 45 to 59 years will increase by 5 million. The increase or decrease, as well as its speed, constitutes a big difference according to age groups. For example, the 15-to-29 age group shows a drop of 14 percent, the 30-to-44-year-olds a 17 percent increase, and those aged 45 to 59 years, a 7 percent increase.

How Japan will adjust to these changes will illuminate the effects of age structure on the social, economic, even cultural institutions of the nations of East and Southeast Asia. For instance, the allocation of the labor force becomes very vital because the youngest group is going to decrease, while the middle and older age groups are going to increase. Thus, the labor-force compositions must be adjusted according to these drastic changes of population by age.

In another problem area, the urban crisis will fan the long-simmering arguments on priorities for population programs versus those designed to achieve social and economic development. Historical experience has taught us that if a country does progress in social and economic development, the birthrate declines. Thus, it has been argued that policy-makers and budget officers should concentrate on achieving social and economic development instead, and the birthrate will essentially take care of itself. This will put pressure on family planning programs and budgets.

Up to now, not very much in terms of national funds has gone into family planning programs. Those who suggest that these programs operate at the expense of other socioeconomic development efforts overlook the fact that the amount of money that has gone into family planning programs to date has been small compared with allocations for education, construction of roads, dams, and so forth. For instance, in many countries, expenditures for family planning come to something like 3 or 4 percent of the education appropriation.

We will no doubt discuss at this conference what the appropriate balance is between investment in family planning programs and that of other social and economic development programs made urgent by present-day political pressures.

Obviously, family planning programs cannot operate in isolation; nor is family planning the sole key to successful social and economic development. It can be seriously argued whether a family planning program is workable in a country that is completely stagnant, underdeveloped, very traditional and rural. But once progress is achieved in other fields, the family planning process then becomes part of the whole modernization process. The burden will be how to resolve these conflicting claims on resources and make these programs reinforce each other.

The political problem embodied above makes for another issue. Critics argue that in Western countries, the impression given to developing nations is that policy-makers try to achieve shortcuts to development via family planning. At the same time, these policy-makers are reluctant to put enough aid money into other economic and social programs and are not prepared to reform trade practices and other policies that cripple development in the poorer nations.

Clearly, population will be linked up to reforms needed in the aid policies of Western and other donor countries. At present, there is already political reaction against population programs in many countries because they think the advanced nations are trying to sell population control as a cheap means of achieving progress.

A related issue is how external assistance can be most effective given the total situation in a country. Since the amount of external aid is not without limit, it will be necessary to make a choice of amounts, nations, and programs. In making these choices, the criterion of "effective population policy" meaning "effective fertility control" should not be the overriding one in the choice of nations but should rather be only one criterion among others—demographic, cultural, social, economic, and political. Nor should the political criterion take the form of utilizing foreign assistance as an instrument in the cold war.

Similarly, the question of what proportion of world resources, especially those of affluent nations, should be mobilized for assistance to developing nations requires a comprehensive consideration of the total amount and all sources of external assistance. Certain-

ly, assistance as now administered by bilateral and multilateral agencies is often competitive rather than complementary, haphazard rather than planned, wasteful rather than efficient. More effective planning, coordination, and efficiency would make the aid dollar go farther and accomplish more.

To what extent does external assistance influence the types of activities and research programs of a given country? Do countries have any options in the kinds of studies they can undertake or the programs they can implement so long as foreign aid is available only for certain specific programs and research projects? National family planning councils may propose programs for support, but in essence the countries' planning boards find it expedient to dispose of such proposals in the light of certain constraints imposed by external assistance agencies. The growing frustrations of family planning administrators on this score are well-known. Unless a policy change in the direction of greater freedom of choice is envisaged, disenchantment and skepticism of the good intentions of donors will result. Furthermore, the standardized requirements for the kinds of programs supported by external agencies influence the nature of involvement that local agencies have in the pursuit of their respective programs. Many funding institutions supporting family planning programs seem to be interested in "crash" programs implying a set of "targets" to be reached within a specific period of time. This approach, however well-meant, builds a bias into many innovation strategies before the program gets started. The issue of fiscal survival—often interpreted as the local felt need—seems to be paramount in the structure of family planning agencies if only because "statistical success" is given highest rating in the assessment of continued support by the external donors. Real commitments seem to be minimal in the process, but involvement (for the purpose of acquiring more funds) seems to be important in the minds of those who are in the field.

Funding institutions should be aware not only of the cultural processes woven into group behavior of their client system but also of the stimulus they create among their own fieldworkers. Often, the nature of appointments of representatives of these external assistance agencies in a given country makes for tremendous success or failure of supported programs—if only because of the desire by many to reflect in their progress reports the statistical success they achieve, within a short period of time, to their home agencies abroad. In this way, commitment to social change built around fiscal support often reduces itself to superficial involvement wherein the program is interpreted merely as a source of livelihood, a job, rather than innovative work concerned with the social philosophy of the program.

The tensions often unleashed by population diversity give rise to still another issue. Diverse peoples have inhabited the same geographical places since time immemorial. But only since the end of World War II, when the world was swept by what Adlai Stevenson popularized as the "revolution of rising expectations," has something volatile been added. Diverse peoples the world over, thanks to the work of journalists and other media men, now possess a vision of equality of opportunity despite cultural, ethnic, religious, and racial differences. Today, we probably have the first generation of mankind in which numerous peoples insist on freedom and independence, if they have not yet achieved them. Also, there are virtually no minority groups anywhere that do not insist on full equality of opportunity.

The problem arising from increasing diversity of population is not only one of living in the same locale but also of sharing the same life space under different conditions. In the past, diversity existed too, but often this was accompanied by forms of rigid stratification, slavery, caste systems, some form of subordination. In the past, diverse peoples, living isolated from one another, commonly regarded themselves as superior to those who differed from them. This created no great problems, as long as they lived separately.

But modern life has broken down these old rigid walls, and unfulfilled aspirations can fuel conflict. Today, under population pressure, this superior attitude can lead to bloody communal conflicts. Hard-pressed financially, governments have yet to make the efforts to provide the necessary education, awareness and understanding of the differences that feed prejudices due to discriminatory practices often found in an intolerable urban setting.

An issue that has not won the concern it deserves—at least in terms of the differentials that are involved—is the problem of death rates. There is universal agreement that death rates ought to come down. This is a matter that has never been seriously argued. And, of course, the swift increase in human numbers is primarily the result of decreases in mortality unmatched by parallel declines in fertility.

But what the world has not yet faced up to, and this is true in the economically advanced as well as in the developing countries, is that within nations there are still tremendous differences in death rates by socioeconomic class, by minority group status, and the like. This is just as true for advanced countries like the United States as it is for any developing country anywhere in the world.

With heightened political awareness, people are developing strong feelings over vast differences in mortality within nations because these result primarily from large differentials in social and economic opportunity and levels of living. What is essentially involved here is greater equalization in distribution of income and socioeconomic opportunity. Without these, differences again can become a basis for more internal conflict. Today's differences in death rates really reflect unacceptable differences in the quality of life. Many give lip-service to the importance of procuring a more equalized distribution of income, but everywhere in the developing world, unfortunately, as well as in the economically advanced countries, action does not match talk.

The whole question of incentives is possibly an even more controversial issue. Here, the whole muted question of coercion is going to surface and become very crucial. There are many people who take a crisis attitude toward population and say that we will really be in trouble unless we rapidly reduce population growth rates to zero. They also note the unlikelihood of bringing population growth down by using traditional programs. They are asking if coercive measures will be needed. Will new levels and forms of social control become (or are they now) necessary? Can relatively democratic systems of rule persist under present rates of growth? Is the right to procreate at will unlimited? What about migration? Is there need for new alternatives to clinic-based family planning? Just what are the social and political implications of moving beyond "voluntary, clinic-based family planning" to "state-sponsored restrictions and incentives"?

Various ingenious schemes providing incentives are in development now. There will be a lot of action—and conflict—in this area over the next few years. But it is clear, at this stage at least, that nothing should be done against freedom of choice until there is incontrovertible evidence of the lack of options.

And then there are the ecologists. The issue here will be population size and survival. What demographic futures are foreseen with and without successful population control? At what levels of living can alternative future populations be supported?

Part of our evaluations, of course, will be shaped partially by

what the researchers will bring forth from their laboratories: the copper-T intrauterine device, prostaglandins, etc. But for all practical purposes, policy-makers and family planning administrators have to work with what is presently available. They cannot build programs on research that will still have to be tested fully.

There probably will be heightened interest in the role of law and other social institutions on population. The ongoing review by Tufts University of the laws in nine countries will have been expanded to 25 by World Population Year 1974. Some broad consensus may have emerged by then and full-blown details could be in progress.

There is, in addition to the above problems, the question of "zero population growth." In this era of space exploration, there is no longer any question about the finite limits of this planet and the inevitability of zero growth. But zero growth as a short-run target is impossible except by resorting to extreme methods that are unlikely to be successful or even acceptable. Although there is no question that zero growth will be attained in the longer run, there is considerable question about whether it will be achieved by nature or by man. If by man, the question is whether it will come about through relatively rational and desirable or through irrational and undesirable means.

Given the inevitability of zero population growth, what are alternative paths to zero growth and which path or combination of paths is a feasible and desirable one? It has been demonstrated that zero growth cannot be attained until about 70 years after the replacement level of children per couple is reached. Ansley Coale and others warn us that too precipitous a decline in birth and death rates may produce problems as difficult as those that we are now trying to avoid. Where does that leave us?

Finally, there is another issue still unrecognized as an aspect of population trends: that which might be thought of as population quality. Before, when one spoke of population quality, people had in mind largely the impact of genetic quality. Population quality today means quality as a function of opportunity for the acquisition of education and skills. Many nations, it is true, are not unmindful of the importance of education and acquisition of skills as a prerequisite to development. But there has not been enough recognition of this as a population issue that must be tackled in relation to other issues. It is still unrealized as one comprehensive national program concerned with the welfare of the people and what might be done to improve their future welfare.

Unfortunately, although the world is becoming mindful of the first of these issues—numbers—in relation to birth and growth rates, and there is considerable action in some parts of the world dealing with this problem of explosive population growth, there has not yet been an awareness of the other equally important issues that form part of the general problem of dealing with the development and welfare of the people. Governments and people are simply not aware of the implications of the other issues—those relating to urban crisis, population concentration, internal migration, communal conflicts, great differentials in mortality, and so on. These problems may actually generate more human misery between now and the end of the century than the problems emanating from excessive population growth.

These issues are not insoluble. But the first step toward their resolution must be an awareness on the part of governments and of the people of the existence of these problems and their interrelationships. Information, knowledge, and education, as well as this awareness, are necessary prerequisites to attempted solutions.

1. The social scientists whose views were obtained were: Dr. Ronald Freedman, Dr. Philip M. Hauser, Dr. Alan Howard, Dr. Gavin Jones, Mr. Toshio Kuroda, Dr. V. T. Palan, Dr. Visid Prachuabmoh, and Dr. Felipe Landa-Jocano.

AN OVERVIEW OF AGENCY ACTIVITIES

W. David Hopper

I: Comment

Introduction

At the preceding Bellagio meetings, much of the time was spent conceptualizing the problems of the population field, establishing priorities for research, and developing strategies for the action to be undertaken by the agencies represented. At the first meeting, in 1970, the contributions of Freedman and Hawkins focused attention on the needs for social and economic research; Maier and Harkavy laid the groundwork for a strategy in reproductive biology; and all were agreed on the need for continuing attention to family planning delivery systems.

By the second meeting, in 1971, there was a general recognition of the major obstacles to be overcome in achieving progress toward the realization of these priorities. It was found that greater efforts were required to plan and initiate a coordinated and systematic search for new contraceptive technology. There seemed to be a serious lack of adequately trained manpower and an overcentralization of institutions for research and training in all fields of population sciences. There was agreement that insufficient resources had been allocated to finding strategic alternatives to family planning. Finally, and perhaps inevitably, there was a general unease because ways had not been found to fully coordinate agency efforts to affect the course of human population growth.

My task today is to look at the recent progress in meeting these and other elements of our common purposes. In so doing I want to emphasize that too often we minimize the viewpoints of the countries with which we are cooperating. This is a dangerous and increasingly wasteful error in view of the growing wealth of experience in the developing world, an experience that should give both donor and recipient an increasing sense of confidence that the problems we are met to discuss can be overcome.

Biomedical Affairs

Let me begin with biomedical research, the first of the identified "priority" areas established in our previous meetings. The development of new methods of fertility regulation has consistently and clearly attracted support and attention from the agencies. In 1971, some 14 percent of total resources had been allocated to this area, mainly from NIH, Rockefeller, Ford, Population Council, SIDA, and AID.[1] With a few exceptions, the lengthy debate on the relative merits of applied, goal-oriented contraceptive research and of "basic" reproductive biological research seems to have been resolved in favor of applied research. The rationale for this favoritism has been: (1) the urgent need for improved contraceptives; (2) the belief that the basic knowledge of the physical and chemical mechanisms of human reproduction is sufficient to open promising possibilities for an early discovery of new contraceptive and fertility control methods; and (3) the widely shared feeling that basic research will absorb tremendous amounts of money with an uncertain likelihood of providing a usable product.

What has been the outcome? There is some evidence that the margin of unexploited basic knowledge is becoming thin, and that research on many of the leads identified in 1971 has closed some of the gaps between fundamental knowledge and its applied promise. It may be that the overall approach has not been sufficiently goal-oriented or task-force-focused to provide definitive answers, and I think there is a valid argument that a systematic, goal-oriented, multidisciplinary approach to contraceptive development has not been as vigorously pursued as it should be. All kudos to the Population Council's ICCR, to the NIH network, and to the WHO task forces (which come closest to being the balanced research groups that are properly called "task forces") for the starts made in this direction. But greater effort appears needed. If it is true that the applied work has reached the edges of basic knowledge, then this "greater effort" should be organized around a task-force approach that will get away from the basic-applied dichotomy, and focus on generating the research needed to achieve a specific end point whether it be basic or applied.

So far, it seems we have not achieved any really significant payoffs for the investment that has been made. However, the issue is not whether more funds should be invested. The present flow seems sufficient for the mechanisms that exist to utilize it fruitfully. The major issue now is the creation of more effective institutional mechanisms to mobilize and utilize greater research resources in an efficient fashion. The present beginnings should be strengthened further; probably new initiatives should be launched; and more daring should be displayed in the organization of the research thrust. And certainly all the activities should be carefully coordinated and regularly monitored—a function not yet given an institutional mechanism.

Permit me to dwell a little longer on the weak coordination effort, particularly with a view to defining more clearly research priorities and the mechanisms for their pursuit. In my view, past efforts to define goals, monitor actions, and coordinate agency efforts have not been very successful. In some respects, too much reliance may have been placed on technical experts to set the directions for allocating research resources and to maintain contact with colleagues at other research centers. I will return to this problem later and argue that the discussion should be broadened beyond the technical issues of biomedicine; but on the narrower technical question, I believe we can build on the presently established

mechanisms to improve coordination and, ultimately, to reexamine the wisdom of present resource allocations.

I would close this section by underlining the importance I attach to the WHO efforts to expand research capacity and the involvement of research workers in the developing countries. I am convinced that an even more active participation of developing-country scientists in population biomedicine is essential, both in terms of the acceptance of new innovations, and in orienting research in directions that will lead to contraceptives that are more acceptable to Third World peoples. To do this successfully, a greater drive for training scientists must be mounted.

Delivery Systems

The second major area of past discussion is the delivery of family planning services. In purpose, family planning services are clearly related to the stabilizing of population growth, and in the past two years there has been a welcome emphasis on the extension of these services to the rural areas of developing countries where the largest number of couples of reproductive age live.

This area, too, has received the major attention of international agencies: 48 percent of total 1971 donor resources went directly to family planning. This included support for national planned parenthood programs, for special activities such as the Population Council's Taylor-Berelson program, and for the provision of necessary supplies and equipment. In addition, by far the largest proportion of resources and manpower in the domestic programs of the countries has been devoted to family planning delivery services.

By its very nature, family planning delivery systems have tended to focus on the supply side of a complex supply-demand circumstance. Several innovations in delivery methods have stressed the development and utilization of a wider range in contraceptive supply outlets, including private sector distribution channels. On the demand side, there are several efforts being made to train and use auxiliary manpower (or, more properly, womanpower) to distribute information and then augment the supply by extending services more widely and efficiently.

As yet, there is little definitive one can say about the impact these efforts have had on their central purpose. The contribution of family planning to declining birthrates is now well-documented in a few small, industrializing, urbanizing countries of Asia and Central America. Outside of these settings, however, little seems known about the contribution family planning has made, or is making, to reducing population growth rates.[2]

More controlled pilot experiments and more evaluations of existing programs are needed to identify the impact of active family planning interventions. Some work has been undertaken in India to test the assumption that the demand for services is dependent on the supply of such services—a kind of Say's law of family planning. Substantially more empirical evidence is needed to test the existence of such a relationship. And even if it exists in India, one still must ponder the question of the role a supply of modern contraceptives plays in influencing demand in other social and economic environments. There is still much to learn about the dynamic relationship between social and economic change, fertility behavior, and the effect of directly interventionist programs.

There is a need also to expand experiments based on broader concepts of delivery systems, systems that take account of other means to meet or motivate desires for smaller families. Such measures would include increasing the availability of abortion, the use of various kinds of incentives for motivators and acceptors, as well as appropriate changes in legal and educational structures and content. Through its International Committee for Applied Research in Population, a start has been made by the Population Council in coordinating this kind of action research.

Finally, a factor that assumes increasing importance in planning and strategy discussions on delivery systems is the growing expertise and experience of the low-income countries themselves. In India, Korea, Hong Kong, Singapore, to name only a few, the expertise and wealth of experience are now considerable. In India, external resources are marginal to domestic commitments. This will be increasingly the case in other countries in Asia and Latin America. It seems evident from the Second Asia Population Conference in Tokyo last November that there is a growing sense of self-confidence and self-reliance in most Asian countries. The expressed need in Tokyo was not for help in mounting population programs, but for the discovery of ways to integrate population-related variables into the overall national planning process. I shall return to this concern below.

Institution Building

The third priority area identified at previous Bellagio meetings was "institution building." As I look back and view the present, I find adding this as a *separate* area of concern may have been misleading. In and of itself, building institutions is hardly a correct statement of priority need. More properly, the creation of institutions should be regarded as a means of achieving other purposes. And while considerable effort has been made to develop institutional structures in the biomedical and family planning area, comparable efforts have not been made for research in the social and economic aspects of population. In other words, the drive to "build" institutions may have clouded the institutional balance required to attain the full set of our overall objectives. It is my belief that if these objectives are clearly stated and pursued, the institutions to attain them will be a natural by-product requiring no separate place of distinction among the list of ends—they will be in all of them as a critical means.

Social and Policy Research

The final priority area is social, economic, and policy research in population. Previous Bellagio discussions have recognized the need for more knowledge of the determinants of human fertility behavior, of the social and economic consequences of growth trends, of the requirement for better demographic data, and of an enhanced understanding of the motivations underlying the dynamics of population movement and change. Without such knowledge, it is impossible to build an empirically valid theory of population and, therefore, difficult to formulate with any sureness a national policy for controlling population, or even to articulate to national opinion leaders and decision-makers the needs and means for organizing a national will focused on population problems.

I am particularly concerned with the relative gap that is now opening between the fairly well-supported research into biomedicine and family planning delivery, and the very small flow of resources to research into the social and economic components vital to policy formation. The work of scholars on the factors underlying fertility makes a rich literature, but it is only a beginning. What has emerged from this work, and particularly from the recent focus on a "new" home economics,[3] is strong evidence that human reproductive behavior is founded on a determinable rationality. If this is so, and I believe it to be, a fuller understanding of the elements that enter into the fertility rationale is likely to be the greatest single asset we can find to underpin a theory of population

change, and to establish a solid foundation for public policies and investments to control that change.

In a sense, an approach to fertility based on solid evidence of rational reproductive action parallels the breakthrough in agriculture that resulted when farm productivity was viewed as the result of rational production decisions made by farmers seeking to maximize personal economic interest. This simple concept unified approaches to inducing upward changes in agricultural output, and provided the foundation for future research directions and for public policies designed to accelerate output. I believe a similar breakthrough is possible in population, although the models involved and the research sophistication will have to be scaled to a problem that is very much more complex than that encountered in farming.

In my view, immediate and substantial attention to this type of work is the most critical need of the present, especially as it pertains to low-income countries. Governments in Latin America and China are broadening their views of national population problems to include population distribution and social and psychological methods of controlling fertility. To a limited extent, there are techniques for incorporating demographic factors into the national planning process, but these have not been widely implemented. There has also been slow progress in improving relevant demographic data, particularly in Africa, where it is least available, but research into the determinants of fertility and migration decisions is advancing, primarily in North America.

The Problem Posed

The least tangible progress on the priorities set at the first Bellagio meeting has been made in social and policy research. Not surprisingly, it has received the smallest proportion (about 2 percent) of total agency resources. Yet this small volume of assistance is only part of the problem. Perhaps of greater importance is a critical lack of research manpower, although it should not be forgotten that in the longer term, research money and manpower available to use it are joint products. Little has been done to attract good minds in sufficient numbers to carry out the research needed to advance our understanding of this multifaceted problem. And, to return to a previous theme, there is the ever-present problem of coordinating existing efforts, such as they are, or of the planning and execution of what might be in the future.

The Problem Addressed

How can we improve the performance in this area? I think the answer is coincident with the answer to the question: "What do planners and decision-makers need to incorporate population into national social and economic development policy?"

First, there is the obvious need for more knowledge about the factors influencing the behavior of families and households. It appears that much of the effort to date has been concentrated on the determinants of family planning behavior, probably reflecting a preoccupation to reduce rapid population growth through the most obvious and direct means. But this concentration has overlooked, even neglected, the influence of other factors in the complex social, cultural, and economic environments surrounding fertility behavior.

As an example, most research has demonstrated the existence of a strong, negative relationship between the education of women and their fertility. Yet there is little information on the nature of the mechanism that actually produced the reduced fertility performance, or on the economic, psychological, and social changes that accompany both education and lowered reproduction rates. One factor that seems to reduce fertility is an increasing age at marriage. If age at marriage is positively influenced by level of education, is the lower reproduction rate the result only of educating women, or are there other measures, perhaps less costly, that will have a similar influence on the timing of marriage? Furthermore, if only the education variable is changed, are the fertility consequences the same, or are other concomitant changes important; changes such as increases in female employment opportunities, the education of husbands, increased opportunities for urban life, changes in housing and residential locale, and so on? Of what value is education to women if no jobs are subsequently created?—a very real problem where unemployment is already serious. And what of the oft-observed depressant influence on fertility behavior of a declining infant mortality? Will fertility behavior change if women are educated but infant and child morbidity and mortality rates continue high?

As yet, there are no answers to these questions; what is worse, there are too few people looking for answers. Through improved empirical information on household and family behavior, it should be possible to obtain a better feel for the relative importance of such factors. A few sophisticated studies exist on some of these relationships; enough to whet the appetite for more, and certainly sufficient to demonstrate the potential immense worth of greater investments in this type of research. The low quality and limited geographic span of presently available data greatly hamper serious research. Additional allocations to social and economic investigations must make an early address to these problems.

A second need is for better information on the consequences of current population growth and its changing age distribution. For example, better aggregate data are required on the future demand for real and financial resources to provide education, health and social services, and jobs for people now alive and yet to be born. Implicit in this requirement is a need for better demographic inputs to the planning process. This is an old, much discussed topic. On the face of it, it is an obvious requirement. It is surprising, therefore, to find little information in national plans, or little assessment in international documents of this "obvious" need. In fact, if mentioned at all, population growth usually relates an early chapter that says all the right things, and, since taken care of by being given a proper precedent, it is carefully ignored in the substance of what follows, the substance of the plan itself.

I do not blame the planners for this state of affairs. Plans are built on an assiduous blend of factual analysis and political dreaming. The problems of population are written in stark fact, true analysis is lacking, and only dreams are left to become the refuge of the frustrated; what more can the planners say? I believe much more should be said and, if we assembled display a concerted will, more can and shall be said.

What should be done to deal with the issue?

Inventory of Research

One of the first requirements is the building of an inventory of the knowledge available on the determinants of fertility and migration behavior. From this must evolve a strategy for improving and extending existing knowledge. One inventory of the social and economic correlates of family fertility has been sponsored by USAID.[4] No comparable inventory exists on migration. However, there are current efforts underway to gain a greater knowledge about the causative elements in both migration and fertility, and to find ways of incorporating demographic factors into planning models. These are being financed by USAID, Rockefeller, Ford, the Population Council, and IDRC. But, again, I fault the coordination practiced, the total level of effort, and the systematic clarity of objectives—all are below what is required. At the very least,

there should be an early joint review and assessment of an inventory of past, present, and planned future activities.

The focus of present research is shifting in the direction of individual family behavior. As yet, the results of such studies are mainly of interest only to professionals in population or related sciences. Before long, however, efforts must be made to translate these empirical results into more concrete, even if tentative, policy alternatives for decision-makers. Some progress on this is being made in the United Nations' preparation of a World Population Plan of Action for the 1974 World Conference, but a larger effort is necessary. The tentative translation from research to public policy must be followed by a number of pilot experiments to provide surer insights into the feasibility of putting into practice many of the suggested action alternatives. It is not too early to begin preliminary discussion on how best to accomplish this.

Training

A major manpower training effort is urgently required. The population conundrum will yield only to the interacting work of social scientists from many disciplines applying their skills and professional tools to its study.

A successful training and research model exists in the United Nations' Demographic Center in Chile. This has not been replicated elsewhere. And while training in population sciences is now being organized at new institutions in Africa, and the UNFPA has recognized the need and importance of investing in training (a program has still to be announced), and even though Ford, Rockefeller, and the Population Council continue to assist the development of university centers, the overall prognosis is not encouraging. There are, and there will be, too few trained people to answer satisfactorily the problems posed within the time available for dealing with them. Again, there is little coordination of effort and even less guidance for ensuring a productive research fallout. In fact, there is not yet an adequate strategy for mixing research and training to ensure the balanced expansion of both.

The Operational Alternatives

There are three alternatives that might be considered for achieving a better coordination of current and future agency efforts in social and economic research and training in population sciences.

The first alternative would be to turn to one of the organizations represented here and, if necessary, provide it with the resources to establish a coordinating secretariat that would be supported by an advisory board or consultative technical group. (An important rider would be the assurance that such a group would draw a substantial proportion of its membership from the developing countries.) The secretariat would be charged with formulating the broad strategies and priorities for international programs of training and research. Small groups of advisers could assess the state of knowledge available to answer particular questions on policy and planning needs, as well as review the manpower and institutional resources necessary to push research further into the demographic, economic, social and psychological fertility and migration interrelationships underlying population dynamics. From these assessments and reviews would come a set of recommended programs to which resources could flow from the separate donors.

Another alternative would be to create a new institution for the express purpose of developing social research and interdisciplinary training. This idea was reviewed at Bellagio in 1970 in a slightly different guise. It draws heavily on the experience of international agricultural research and the establishment of the Consultative Group on International Agricultural Research in 1971, and in my view it has much to commend it. There are obvious problems, however, and I shall not explore the suggestion further. I would urge only that in our discussions, we keep it firmly in mind as an important option.

The third alternative, and perhaps the most desirable for its inherent decentralization of control and opportunity for LDC participation, is the development of regional mechanisms for population research. An example of this type of activity is the Latin American Program of Social Research on Population Problems Relevant to Population Policies. In this case, the work of established social research institutions in Latin America is being evaluated by an indigenous regional committee as a first step toward mapping strategies for future research and for the coordinated allocation of research resources. While comparable linkages between institutions have not yet been forged in other regions, scientists and institutional administrators from these regions could be brought together to formulate the means for effecting interinstitutional collaboration. What is required is the assistance of outside agencies to build and support the operations of the separate regional secretaries and their advisory bodies.

Ford and Rockefeller have in the past two years developed a global competition idea that might serve to underpin the establishment of regional social research networks. Present thinking seeks to adapt the idea to the distinctive characteristics of the different regional levels, and likely it could be broadened to include training elements designed to advance the skills of younger social scientists. Over the longer run, the model could embrace the coordination of institutional activities within and between regions, and foster the development of training opportunities and programs.

Summary

From this brief comment on agency activities, I would draw your attention to the following points.

1. In the biomedical fields, significant research progress has been made; enough progress to produce some harbingers of a possible future necessity to restructure the present balance of resource allocations to basic and applied research; or, and perhaps better, to encourage the building of goal-oriented task forces financed at the level required to pursue their separate aims without reference to a distinction between what is basic and what is applied.

A consistent refrain in this paper has been the need for improved coordination among donors and among research scientists. In the biomedical field, there is still a gap between reality and a pattern of research that is effectively coordinated. But I do not wish to press this too hard. Present circumstances are substantially improved over 1971, and I have no doubt this trend will continue. The question is whether coordination should be left to evolve in its own fullness of time, or whether it should be consciously nurtured with a greater determination.

2. The approach to improving family planning delivery systems should be broadened to include a concerted follow-through on methods of supply that go beyond the public sector and the health infrastructure. There should also be enhanced efforts to evaluate the impact of family planning programs in inducing fertility decline. Such evaluations must become more dynamic and more comprehensive, taking into account not only program components but, additionally, the attendant social, economic, and psychological variables as they alter over time.

3. Finally, a major effort is needed to expand and coordinate research, training, and pilot project actions directed to making national development policies far more sensitive to the determinants of human reproductive behavior. There are means in addition

to the direct introduction of biomedical techniques through family planning for engendering change in population growth rates. We know they exist, that they are being applied in some countries (e.g., social sanctions in China), and that they are at work in all. But we do not know well what they are, how their influence is transmitted or felt, or how to use them as a means of attaining public purposes.

II: Summary

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Outlined below for summary purposes are the activities and plans of the major donor agencies in the population field. Information on terms of reference as well as program projections is included where available.

1. United Nations Fund for Population Activities (UNFPA)

a. Terms of Reference

The terms of reference of the UNFPA are:

To assist in promoting awareness of social and economic implications of population problems and of their possible solutions;

To extend systematic and sustained assistance to developing countries desiring assistance to assess and cope with their population problems;

To extend capabilities of relevant organizations of the United Nations system, within the framework of their respective mandates, to provide efficient and effective assistance to countries in planning, programming, and implementing population projects; and

To provide leadership for expanded population activities within the United Nations system and to coordinate programming, planning, and implementation of projects supported by UNFPA.

b. Program Projections

The UNFPA provides grant support to most population activities, frequently through the UN agencies, but also through other competent executing agents. Expenditure estimates for 1972–1975 by rank are as follows:

Rank	Category	$ (Millions)	% Distribution
1	Family planning activities	118	47
2	Population data	35	13
3	Population dynamics (including training)	29	12
4	Communication and education	27	10
5	Program development activities	24	10
6	Multisector activities	15	6
7	Population policy	7	2
		$255	100%

Financial resources have increased from $4 million from 7 donors in 1969, to $49.4 million in 1972 from more than 50 countries.

c. Major Program Activities

Family Planning Activities: The fund encourages and supports development and improvement of family planning delivery systems, both within organized health services and through other appropriate channels. Special attention is paid to training of personnel at all levels as part of the overall effort to develop comprehensive programs of support. Assistance includes advisory services, provision of vehicles and equipment, contraceptive supplies, and, in a few cases, construction of facilities. Particular support is being provided for the introduction of family planning advice and services to women at the time of childbirth or abortion, in the Arab Republic of Egypt, Iran, Korea, Pakistan, the Philippines, and Tunisia. Priority is given to expanding domiciliary maternity-centered family planning activities, but attention is also given to extension of family planning advice and services through such channels as occupational safety, industrial health services, and the health services of mines, plantations, and rural development corps. In addition, the fund recognizes and supports, where governments consent, the development of family planning delivery through nongovernmental agencies in countries without official programs.

Recognizing the importance of organization and management of family planning programs, advisory services are now being provided in Indonesia, Iran, Korea, Pakistan, and the Philippines. Furthermore, the fund is now supporting some operational research to test various approaches to family planning services delivery.

Population Data Collection: Assistance to governments in the collection, analysis, and improvement of basic data relating to population is already an established part of the activities in the United Nations system. In this context, the fund is involved in assisting some 20 African countries to carry out population censuses in the framework of the African Census Program. In other regions, support will be provided for analysis of census results and to strengthen capacity of regional UN demographic centers to provide technical guidance and support for planning, execution, and analysis of census data.

In addition, the fund is supporting a number of sample surveys of population in some countries that have been unable to undertake comprehensive censuses.

Population Dynamics: In response to growing interest in dynamics of population, the fund is supporting some research into such interrelationships as that between demographic factors and the rate of economic growth; the impact of modernization, urbanization, improvements in agricultural productivity on family building patterns and demographic patterns. Investigation into the major determinants of human reproductive behavior is supported.

Support for research is provided on large-scale interregional basis, rather than to individual projects.

Included are support for the World Employment Program for comparative research projects of the regional demographic and economic commissions.

The fund is also supporting the strengthening of training capacity of regional economic commissions and demographic training and research centers including two newly created centers in Sub-Saharan Africa in Yaoundé and Accra.

Future emphasis will be placed on assistance to the preparation of population projections and the demographic aspects of educational planning and human resources planning support; on regional seminars and expert groups in the application of demographic data in planning. The introduction of population materials in training of officials of

national planning offices is contemplated.

Communication and Education: Priority has been given to activities aimed at strengthening communication programs in support of family planning. Regional training courses for communications personnel are planned, as are research projects to study motivation, strategies, and use of mass media and nonverbal communication. The fund supports activities aimed at providing education on population and family life to children and youth at appropriate ages, in Asia and Latin America.

Population Policy: Priority in this area has been given to improving the "state of the art" and to identify and test elements of comprehensive population policy. Support has been provided for the preparation and holding of regional population conferences and for the 1974 World Population Conference. Special attention will also be given in the activities of World Population Year 1974 to create awareness of the need for population policies among government leaders, decision-makers, and influential groups within communities.

Research centers and universities in 11 developing countries are receiving UNFPA support to enable them to collaborate in a major study of legal factors bearing on population trends. Financial support is also being provided for a study into the relationship between social security and fertility.

2. International Bank for Reconstruction and Development

a. Terms of Reference

The bank's lending program for population and nutrition projects emphasizes support to family planning programs recognizing the important contributions supply of adequate services may make to fertility decline. In addition, the bank recognizes the importance of assisting those countries with large populations. Terms of reference specifically exclude support for data collection or biomedical research.

b. Program Projections

The bank's actual and projected lending for population between 1972 and 1976 is as follows:

	1972	1973	1972-1976
Commitments ($ million)	29.0	30.0	150.0
% total bank and IDA commitments	1.0	1.1	1.0
Number of countries	3	4	19

Projects as envisaged will be in countries with some 70 percent of the population of the bank's developing country members.

c. Program Activities

Assessment: The bank plays a role in assisting, on request, members in assessing their demographic situations within the context of their overall development objectives. Development of loans in population include participation in sector missions to assess national population problems, policies, and programs in specific countries. Preinvestment studies are subsequently carried out in preparation for actual projects.

Institution Building: One of the bank's most useful contributions is in technical assistance, including education of decision-makers on the general implications of population growth, and assistance to governments with fact-finding and analysis of their demographic positions. The bank also has the capability of assisting governments in building the exceptional types of institutional structures required to plan and administer successful family planning programs. Such assistance includes help in organization and staffing of family planning agencies, assessment of family planning programs' manpower needs, planning and provision of training for medical, social, and demographic personnel, design collection and processing of service statistics, evaluation, design of research, etc.

Training: In connection with bank projects, local training of operational workers as well as external training of personnel in various disciplines is supported.

Physical Facilities: The bank plays a major role in assisting countries in development of physical facilities to enable more effective delivery of family planning services, frequently within the existing framework of a government's health services. Other kinds of physical facilities required include those for communication, information, and education, production of educational materials, and research on socioeconomic and technical problems.

Communications: Emphasis will be given to stimulation of demand for family planning services, especially in the larger of the less developed countries. This will include provision of information about family planning to individuals, group motivation, and individual communication.

Research: The bank's main support for research relates to the operation of the family planning programs it finances. Thus, areas of particular concern include methodological aspects of family planning programs such as cost-effectiveness and cost-benefit questions, techniques of evaluation. In the area of economic and operationally oriented studies, the bank limits its involvement to activities that will illuminate research undertaken by others.

3. United States Agency for International Development (USAID)

USAID has principal responsibility for United States assistance to population and family planning programs in developing countries.

a. General Terms of Reference

In general, AID funds make possible a variety of actions:

Development of more adequate demographic and social data;

Development of more appropriate population policies;

Development and use of improved means of fertility control;

Development of more adequate systems for delivery of family planning services;

Development of more adequate systems for delivery of information and education;

Development of more adequate multipurpose institutions and trained manpower for support of population programs.

b. Record

Since 1966, 55 percent of the USAID obligated funds ($144 million) directly supported country or regional population family planning programs. Forty-five percent

($118 million) was programmed centrally through international organizations including the United Nations ($21 million); International Planned Parenthood Federation ($22 million); Population Council ($17 million); Pathfinder Fund ($7 million). Projects with American universities to assist developing countries through interinstitutional development, technical assistance and training received about $25 million; research, aimed mainly at improving fertility control, $22 million.

c. Major Areas of Assistance

Training and Manpower Development: Recognizing the shortage of adequate manpower is a critical problem to building family planning delivery systems; USAID provides U.S. and third country training in family planning, statistical methods, medical research, implementation of census and vital registration, planning and management of population/family planning programs, evaluation, population economics, population dynamics, and population policy.

Commodities: Through its bilateral assistance program, more than 70 countries have been assisted in obtaining equipment and contraceptives including oral contraceptives in particular, as well as condoms and intrauterine devices.

Family Planning Programs: Major USAID support has gone to the International Postpartum Program of the Population Council, which has been developing an approach for providing family planning services in the period immediately following delivery or abortion. Support is also given to the extension of this approach and to abortion programs in conjunction with provision of effective contraceptives.

Research: AID's population research program includes descriptive demography, analysis of population dynamics, family planning program operations research, and development of improved means of fertility control. Activities have been undertaken in North American universities as well as in developing countries themselves. In the area of improving fertility control, USAID has obligated over $21 million since 1966. Major research activities supported include investigation of ways of controlling the function of the corpus luteum, and development of prostaglandins as a "once-a-month" self-administered means of fertility control. In addition, support has been given to improvement of current methods, in particular, the IUD.

Communications: USAID is assisting country programs to increase the flow of program-building information to leadership groups and to the larger public. In addition, it supports a wide range of extension education and information services that encourage public concern with population problems. Projects supported include a direct mail system within India's family planning program. Activities in education and public information have been supported in a number of countries in Latin America and Africa.

Evaluation: Assistance in this area includes support for the development of improved evaluation methodologies, use of computer-based evaluation technology, and assistance to countries wishing to better analyze available data on characteristics of their population, improve their understanding of existing population dynamics, and develop appropriate population policy.

Institution Building: Since 1965, funds have been made available to enable U.S. institutions to develop their expertise in the population field and link this to developing country institutions and problems. Assistance has also been given to developing country institutions to enhance their capacity to perform their functions.

4. Swedish International Development Agency (SIDA)

a. Terms of Reference

One of the first official agencies to provide assistance in the population field, SIDA's assistance through bilateral programs has decreased, while international organizations and research have received growing support. Bilateral assistance is concentrated in a limited number of countries, but with few restrictions as to the kind of assistance provided. Multilaterally, SIDA cooperates closely with UNFPA and IPPF.

b. Program Record

Swedish assistance in the field of population/family planning totaled U.S. $52,768,000 between 1958–1972/73. Fifty percent has been provided on a bilateral basis to 6 countries: India, Malaysia, Pakistan, Republic of Korea, Sri Lanka, and Tunisia.

Bilateral assistance has mainly consisted of contraceptives, clinical and printing equipment, vehicles, audio-visual materials, experts, and to a lesser extent financial support of national family planning programs.

Assistance to International Organizations: Receives increasing support, particularly to UNFPA and IPPF, as well as OECD Development Center, World Council of Churches, and IUSSP. Assistance has been provided to specific projects, but, in the future, general budgetary support for programs in developing countries will be provided.

Research: SIDA supports the WHO Expanded Program of Research in Human Reproduction.

Sex Education: Seminars on sex education and the Swedish society have been arranged for participants from Latin America and the Caribbean. Plans exist to arrange other types of assistance to family life and sex education upon request.

5. International Planned Parenthood Federation (IPPF)

a. Terms of Reference

The IPPF includes the following in its aims:

> To advance education of countries of the world in family planning and responsible parenthood . . . ;
>
> To increase understanding by people and governments of demographic problems of their own communities and of the world;
>
> To promote population education, sex education, and marriage counseling;
>
> To stimulate appropriate research relating to human reproduction, psychological, social, economic, eugenic aspects of human fertility, subfertility . . . ;
>
> To stimulate and assist the formation of family planning associations in all countries and to promote family planning through other appropriate organizations;
>
> To encourage and organize training of all appropriate professional workers . . . ; and
>
> To organize workshops, seminars, and conferences at regional and international levels.

b. Program Expenditures

	Actual Expenditure 1971 ($ million)	Estimated Expenditure 1972 ($ million)	Projected Expenditure 1973 ($ million)
Conferences and meetings	.43	.72	1.15
Information and education	2.60	3.24	4.55
Training	1.44	1.50	2.02
Administration	4.23	5.31	6.12
Medical and clinical	5.15	7.14	8.70
Fieldwork	1.50	2.44	2.58
Special projects	1.83	2.09	1.37
Fund-raising	.43	.46	.56
Commodities	1.68	3.21	3.33
Total:	$19.29	$26.11	$30.38

Member associations are encouraged to improve their own financial and human resources through local efforts of fund-raising and mobilization of volunteers and qualified professionals.

c. Major Activities

Major activities of the IPPF are carried out in the countries that compose its membership. Overall administrative responsibilities are centralized in the head office in London. Decentralization of program development and planning is taking place; regional offices are being strengthened to take more responsibility for professional and administrative activities in their respective regions. Regional offices exist in Africa, the Middle East and North Africa, the Western Hemisphere and Southeast Asia, Europe and the West Pacific.

Education: Emphasis is accorded activities to improve fieldworker training, community education programs, population and sex education in school systems, projects to reach out-of-school youth, as well as education of national public servants, political and community leaders.

Medical Programs: The IPPF supports innovation to improve family planning delivery systems through use of auxiliary personnel. Nonmedical delivery of contraceptives is being supported. Abortion and its relationship to contraceptive practices is being examined. Clinical trials of new contraceptives are undertaken.

Research and Evaluation: Improvement of evaluation methodologies to assess the effectiveness of family planning programs is being emphasized, as is self-appraisal of activities and services of member associations. A major research effort to be undertaken in 1973 is a Worldwide Study of Unmet Needs in Family Planning.

Social Research: Studies are supported to determine factors that will increase acceptance of family planning. Policy-related research is also supported to develop approaches to effect legislative change.

Technical Assistance: Technical assistance is provided in all of the above areas, as well as in relation to overall development and management of national programs.

6. Ford Foundation

a. Terms of Reference

As of March, 1972, major activity areas projected for the next five years included:

Strengthening biomedical research, especially in developing countries;

Strengthening social science and management research, especially in developing countries;

Exploring the area of population policy;

Assessing worldwide progress on the study of population problems and international efforts to deal with them.

b. Program Projections

Volume of foundation resources allocated to population depends on the volume of other resources in the field. With the increases undertaken by other agencies, it is thought likely there will be a decline in the need for foundation funds.

c. Program Activities

Population activities for research, training, and institutional development in the United States are budgeted through the Population Office in New York. Activities in developing countries are budgeted through Regional Offices.

Reproductive Biology: Fifty to sixty percent of Population Office expenditures ($10–$15 million a year) are devoted to reproductive biology and contraceptive development. Priority is given to overseas programs in Europe, Japan, Australia, and Israel, due to ready availability of support in the U.S. Major support is given to the International Committee for Contraceptive Research and to WHO Expanded Program in Human Reproduction. Program emphases include new approaches to fundamental research on an interdisciplinary basis, continued selective support to areas of fundamental research in reproductive biology, and exploration of innovative models for carrying out research.

Social and Population Policy Research: The foundation's special interest in population policy has been expressed through support of the joint Ford-Rockefeller Foundation Program in Social Sciences and Legal Research on Population Policy. A follow-up activity being explored is the establishment or strengthening of an institution in the U.S. to conduct continuing policy studies. Priority is also given where needed to programs to educate leaders and opinion-makers.

Management of Population Programs: In this area of major emphasis, the foundation is exploring the possibility of linkage between indigenous management institutions in family planning programs with the management resources of industrialized countries. Management interests include planning, administration, and evaluation of information and educational efforts in the population field. Ford's Latin American and Caribbean office is also interested in developing ways to combine maternal and child health services with nutrition and family planning education.

7. Rockefeller Foundation

a. Terms of Reference

The Rockefeller Foundation is concerned with supporting important areas in the population field that other organizations cannot or do not support. Operations emphasize the importance of coordination with other organizations.

b. Program Activities

Basic Research in Reproductive Biology: An area of major emphasis, restricted to those research fields with potential for contraceptive development. Strategy is to build up centers of strength in North America, to increase the number and quality of research personnel through post-doctoral fellowships, and to build links between basic science and action-oriented clinical departments.

Similar strategy is applied with regard to contraceptive development.

Family Planning Action Programs/Technical Assistance: The foundation does not support purely service activities, considering this a public or governmental function for which large amounts of resources are now available. Assistance is provided for professional education through demonstration family planning clinics in medical schools, through teaching programs on population and family planning in medical schools and universities. Some support is provided for the training of auxiliary manpower. Family planning programs integrated with community health are supported on a research and teaching basis in Colombia and Thailand. Technical assistance for family planning programs is restricted to development of local resources in management and evaluation in developing countries.

Education and Training: Foundation resources are channeled through the Population Council's Fellowship programs in demography and the social sciences, technical assistance and reproductive biology.

Social Sciences and Population: A concentrated effort is underway to stimulate and increase support of research into factors influencing family size, population growth and distribution. These include legal factors, political and policy issues, economics, unemployment and manpower studies, behavioral and psychological factors, ethical factors and the role of women.

8. The Population Council

a. Terms of Reference

The council promotes research, training, and technical assistance in the social and biomedical sciences. It serves as a center for information collection and exchange on new ideas and developments in the field.

b. Major Program Activities

Training: The council carries on a fellowship program providing training to developing country personnel in demographic and social sciences, technical assistance and reproductive biology, at an annual level of about 120 fellows.

Technical Assistance: Includes resident advisers to family planning programs in 8 to 10 developing countries. The council continues its involvement in the delivery of family planning services to postpartum mothers, but hopes to see this program taken over by WHO. In the meantime, it is developing a series of demonstration projects integrating maternal and child health care with family planning programs in five countries.

Contraceptive Development: The council carries on goal-oriented research through the International Committee for Contraceptive Research and the Biomedical Division.

Research and Evaluation: This is an area of enlarging interest in relation to evaluation of programs intended to reduce population growth. A major thrust to develop new programmatic leads is being made through the International Committee for Applied Research and Population (ICARP), particularly concerned with use of incentives and measures "beyond family planning."

Social Research and Population Policy: The council is pursuing research interests into the determinants and consequences of urbanization and migration; the relationship between population and international affairs; the economic aspects of family fertility; ways to increase use of demographic variables in planning. It is supporting research into relationships between employment and population growth, and is interested in population/environment interrelations. It is concerned about improving research into the determinants of fertility; and with the process of formulating and implementing population policies.

Developments in fertility decline in China, Cuba, and Eastern Europe are being studied. Other interests include management of family planning programs, use of the commercial sector to distribute contraceptives, abortion studies, and investigation of the possibility of social structure interventions.

Institutional Development: Is being undertaken to develop demographic capability in developing countries, and to support improved research capability in the social, economic, and policy aspects of population problems.

9. Others

Bilateral programs include those of the governments of Canada, Denmark, Federal Republic of Germany, Japan, the Netherlands, Norway, and the United Kingdom. While each government carries on a certain amount of bilateral assistance to family planning, and in some cases to contraceptive research, the major proportion of their resources allocated to population activities are channeled through multilateral agencies, in particular, the United Nations Fund for Population Activities, and the IPPF, as well as OECD.

10. International Development Research Centre (IDRC)

IDRC, a public corporation, was created by the Canadian Parliament in 1970. "The objects of the Centre are to initiate, encourage, support and conduct research into the problems of the developing regions of the world and into the means for applying and adapting scientific, technical and other knowledge to the economic and social advancement of those regions. . . ."

The Population and Health Program emphasizes the following program areas: research into the dynamics of population change; research into the provision and distribution of health care to rural areas; action research into alternative models of delivering contraceptive information and supplies; population policy research; support to goal-oriented studies of new methods of fertility regulation; delivery of health services utilizing trained auxiliaries to reach peoples in rural areas.

1. For analysis of relative resource allocations by agencies, see table 1. Data for analysis were provided through correspondence with each agency.

2. An evaluation effort in Costa Rica seems to point to the importance of a change in the age of marriage and to the influence of private sector efforts on contraceptive use as contributors to lower fertility levels. Work in Asia suggests that changes in the age distribution and age at marriage are as important as changes in marital fertility in lowering birthrates.

3. See especially "New Economic Approaches to Fertility," special supplement to the *Journal of Political Economy*, vol. 81, no. 2, part II, March/April, 1973, the University of Chicago Press; and particularly, the "Combined References," pp. 5289-5294; and the statement by T. W. Schultz on "The Value of Children: an Economic Perspective." The supplement comprises a collection of papers presented at a conference held in June, 1972, under the sponsorship of the Population Council and the National Bureau of Economic Research. See also J. B. Wyon and J. E. Gordon, *The Khanna Study*, Cambridge, Massachusetts: Harvard University Press, 1971, for a classic study of the micro aspects of family, social, and economic life as these affect reproductive behavior.

4. It found that adequate research had been carried out only with regard to the influence on fertility of education, and of female labor force participation in developed countries. See Research Triangle Institute, *Social and Economic Correlates of Family Fertility: A Survey of the Evidence*, Research Triangle Park, North Carolina, September, 1971.

Table 1

1972
Budgetary Distributions: Percentage[a]

Area	UNFPA	IBRD	USAID	SIDA	IPPF	FF	RF	PC
Basic population data	(approx.) 12		8			.2		
Population policy issues (includes population dynamics, population policy, population education)	11		9		10	7.7	15	
Family planning delivery systems	46	49	50	29	70	4.5	3	25
Biomedical affairs	5		11	28	3	44.1 basic 6.1 applied	34	30
Training facilities and resources	22	20	15	42	26	33.8	(to Population Council) 45	34
Other	5	30 contingencies	7		1	3.6		5
Total ($ million)	26.5	19.5[b]	91[c]	13-15	26.1[d]	14.7	6.8	17.0

[a] Rounding of percentages by area prevents all adding precisely to 100%.
[b] Although bank group finance is usually heavily weighted toward "hardware" items, the bank's primary interest lies in strengthening population programs and institutions ("software activities"). Project agreements normally include provisions on the latter, even where no bank financing may be involved.
[c] Contribution to UNFPA—$29 million not included above.
AID/Washington costs—$3.3 million not included above.
Total USAID obligation FY/72—$123.3 million.
[d] $10 million from U.S.; $1 million from UNFPA; $1.8 million from Sweden.

Table 2

Change in % Distributions 1971-1972

Area	UNFPA	IBRD	USAID	SIDA	IPPF	FF	RF	PC
Basic population data	−4	0	0	0	0	0	0	+1
Population policy issues	−2	0	−1	0	0	−2	+3	+1
Family planning delivery systems	−3	0	0	−4	+3	−2	0	−6
Biomedical affairs	+1	0	+4	+8	0	0	−12	0
Training facilities and resources	+6	0	≈0	−3	−1	+3	0	+5

SOCIAL RESEARCH AND POPULATION POLICY

Oscar Harkavy

Summary

"Population policy," as used in this report, follows Berelson's definition: "government actions that are designed to alter population events or that actually do alter them." Study of population policy encompasses the interrelations of four population variables—size, rates, distribution, and composition—and four broad institutional or behavioral categories—economic, political, ecological, and social. It includes study of both the determinants and consequences of population change. Work of the United States Commission on Population Growth and the American Future is an attractive example of attention to broad issues of population policy applicable to other countries.

On the assumption that donor agencies should avoid direct intervention in the population policy of host countries, their proper concern is the development of competence within a nation to understand that nation's population problems and to make appropriate policy recommendations. This suggests support of host country universities and research institutes to encourage policy-relevant social research and mechanisms to provide linkage between academic research and policy-making.

In Latin America, the most exciting development in population policy research is the formation of an international consortium of eight research centers in five countries coordinated by a multidisciplinary team at the Latin American Demographic Center. The consortium will undertake comparative research on problems relevant to formulation of national population policies. This mechanism builds on the relatively strong cadre of well-trained social scientists available for this work in Latin America and is funded by five donor agencies.

Asian universities give relatively little emphasis to policy-relevant population research despite heavy government involvement in population matters on that continent. A few mechanisms have been established for comparative work on population problems: a study by psychologists and sociologists of five nations in Southeast Asia on the perceived value of children by their parents; the Organization of Demographic Associates, an alliance of seven Asian demographic centers conducting comparative research on population dynamics, including manpower and the labor force; and the Council for Asian Manpower Studies, focusing on Asian employment studies.

In Malaysia and in Thailand, plans are under way to establish population units within their central planning organizations that will not only provide population intelligence for use in economic planning, but will seek to formulate alternative strategies and tactics for implementing population policies.

Of the three developing continents, Africa is least rich in social science competence. There is some population policy research under way, however, and African institutional arrangements offer particular opportunities for direct links between academic research and policy-making: university-connected economic and social policy institutes regularly conduct research under contract for government policy-makers.

U.S.-based academics and donor agencies have developed a number of international programs to encourage research and discussion on population policy in the developing world. These include the National Academy of Science's International Seminars in Policy Analysis; compilation of laws affecting population dynamics and development of model codes to protect human rights by legal scholars in 28 countries, organized by Professor Luke Lee of the Fletcher School; an International Population Policy Consortium originated by political scientists at the University of North Carolina involving participants from a number of developing countries; the Smithsonian Institution's International Program for Population Analysis supporting policy research in the developing world; the Ford-Rockefeller program of social science and legal research on population policy that offers research grants on a worldwide competitive basis for policy-relevant research; and replication of this program in Brazil, and, in a modified form, in Southeast Asia.

Field experiments such as the India tea estate plan and the Taiwan education bond scheme that reward couples with small families offer an opportunity to test hypotheses formulated by social research on population policy. Invaluable opportunities for empirical research are afforded by such "natural experiments" as Singapore's recent antinatalist decrees.

Recognizing the long-term nature of the population problem, donor agencies should be prepared to make extended commitment to the substantial increase of social science competence throughout the developing world, not only for better understanding of population policy but of the entire spectrum of development problems.

Merely increasing the supply of social scientists through graduate fellowships is not enough; there is need, through appropriate institution-building, to provide them with rewarding careers in policy-oriented research after they are trained.

Special attention must be paid to strengthening linkage mechanisms between academic researchers and government policy-makers, as through establishment of population units in central planning agencies.

Continued encouragement should be given to international networks of scholars and consortia of institutions engaged in comparative research on common problems relevant to population policy. Donor-sponsored programs of research grants on population

policy are useful in stimulating interest, but should serve only as forerunners to sustained attention to a nation's own population problems by its own scholars and policy-makers.

Social Research at Bellagio I and II

At Bellagio I, Professor Ronald Freedman, of the University of Michigan, made a compelling case for increased emphasis on social science research in his paper, "Social Research and Programs for Reducing Birth Rates." He focused primarily on the need to understand the complex social and economic institutions that affect fertility and on the need to evaluate the effectiveness of family planning programs. Staff of the Population Council prepared two relevant papers for Bellagio II. The first, entitled "Positions, Programs, Centers," proposed a strategy of building population-related social research and training capability at universities in the developing world.[1] The second, "Social Research on Population Planning," called for funds to enlarge and improve the work of the best 25 or 30 social research centers in the industrialized as well as in the developing countries for particular attention to research on ways of altering the social structure to encourage lowered fertility, i.e., to study population policy "beyond family planning." An informal memorandum was submitted by the Ford Foundation to Bellagio II noting plans for establishing a consortium of institutions in Latin America for comparative research on population policy (see further discussion below) and giving tentative findings from explorations of social science and management capacity for work on population problems in Asia.

In the discussion provoked by these papers, there was general agreement on the need to assess existing strengths in the developing world and to build on these strengths, and rather less consensus on the utility of strengthening outstanding research centers in the industrial world for work on population problems in the LDC's.[2]

Definition of Population Policy

Because the use of the social sciences in the management and evaluation of family planning programs will be discussed later in this conference in the context of delivery systems, this paper will confine its primary attention to social research as it relates to population policy.

The "population community" has always been preoccupied with questions of population policy: first with the modification of government policy to permit family planning activities under private, voluntary auspices, then with securing the commitment of government to officially sponsored national family planning programs. There is particular interest today in population policy as it goes beyond family planning and considers ways of altering the economic and social environment to encourage smaller families. An interest in population policy is not only motivated by fertility concerns, however; questions of internal and international migration and the composition of populations are often of even greater immediate concern to national decision-makers. Another whole series of issues relates to the consequences of population change, typified perhaps by a growing attention on the part of Indian scholars and government officials to a "Second India"—the consequences to that nation of a population that will probably exceed 1 billion by the end of this century.

Matters of population policy thus can expand quickly to cover all aspects of national life, and it is necessary to mark boundaries around the topic for meaningful discussion and action. A useful working definition of population policy was provided by Bernard Berelson in his essay "Population Policy: Personal Notes," provided as background reading for Bellagio II. In this paper, Berelson defines population policy as "governmental actions that are designed to alter population events or that actually do alter them." This definition encompasses population size, rates (birthrates, death rates, rates of natural growth, rates of total growth), distribution (including both internal and international migration), and composition (including demographic factors such as age, social factors such as ethnic status, and such biological factors as genetic character). Berelson constructs a 16-cell table in which four broad institutional and behavioral categories—economic, political, ecological/environmental, and social—interact with the four population categories:

	Population			
	Size	Rates	Distribution	Composition
1. Economic	S1	R1	D1	C1
2. Political	S2	R2	D2	C2
3. Ecological/ Environmental	S3	R3	D3	C3
4. Social	S4	R4	D4	C4

In this construct, the consequences as well as the determinants of population change are included in the domain of population policy.

The work of the United States Commission on Population Growth and the American Future should also help define the boundaries of population policy. The commission's report and the 70 research papers prepared for the commission were concerned not only with population growth and distribution, but also with the interrelations between population dynamics on the one hand, and the economy, resources and the environment, government, and such population-related aspects of society as the family, racial and ethnic minorities, education, status of children and women, and immigration, on the other. The topics treated by the commission and its collaborating scholars should serve as useful guides to the kinds of social research that are required as a nation gives serious attention to population policy, and distribution of these volumes to scholars and government planners throughout the world would probably pay dividends.

Contributions of Social Research to Population Policy

The work of the Commission on Population Growth offers an impressive array of social science research that has led directly to policy recommendations. These, of course, relate to U.S. policy issues, but they illustrate the kind of research that can be carried out within other nations. To take an illustrative sample: The commission's demographic projections showed the enormous differential effect on U.S. population size of a two-child, as compared with a three-child, family—in 100 years this nation's population would total nearly a billion with an average of three children per family, but about 350 million if families limited themselves to an average of two children. This straightforward demographic analysis may well have a major impact on perceptions of "ideal family size" and on policy measures to influence fertility.

The construction and analysis of macroeconomic models of the United States show that per capita income may be up to 15 percent higher by the year 2000 if the two-child, rather than the three-child, family remains the norm. Such analysis demonstrates, too, that slower growth of the nation's total population (not only of its poor) would help in reducing poverty, but would not eliminate it. Detailed industry studies prepared for the commission indicate that the adjustments made by business firms in response to

changes in consumer tastes and technological developments would be far more disturbing than those required by a lowered rate of population growth. Thus, "the loom tender in the diaper factory is hurt more by the competition from synthetic disposables than by the recent decline in births."[3]

Models developed for the commission by Resources for the Future in which alternative projections of population and economic growth were examined for their impact on resources and the environment yield important policy judgments, not the least of which is that control of population growth will not necessarily resolve environmental/resource problems, although it would help. According to these models, economic growth has a greater effect than population growth on projected demand for the 19 most important nonfuel minerals, and the United States will probably be able to obtain the supplies it needs in the next 50 years, even with the population growth implied by an average family size of three children. The supply of energy, however, is shown to be under tremendous pressure, even if average family size is two children. This work clearly demonstrates the need for development of "clean" sources of energy, because energy demands put severe strains on the environment under any plausible projection of population growth.

Projections of population distribution within the United States make it clear that water must soon be treated as a scarce resource with a pricing system conducive to conserving water. Studies of hydrocarbon emissions and other pollutants show the need to control pollution by increasing emission standards and reducing sources of emission—a problem exacerbated by high population growth, but one that cannot be solved solely by lowering birthrates.

Social science contributions to population policy-making have not been confined to the analysis of "macro" models. The commission's recommendation of contraceptive services for unmarried teen-agers relies heavily on the Kantner-Zelnick study "Sexuality, Contraception, and Pregnancy among Pre-Adult Females in the United States." This survey showed that:

> . . . 14 percent of 15-year-olds and up to 44 percent of [unmarried] 19-year-olds reported having sexual relations. Only 20 percent of these girls used contraception regularly. Such a low incidence of contraceptive use is particularly significant when less than half of these girls knew when during the monthly cycle a girl can become pregnant.[4]

Attention should be called to a study predating the work of the commission that was singularly instrumental in demonstrating to policy-makers that improved contraceptive practice on a voluntary basis would go far to reduce population growth in the United States.[5] By analysis of interviews with 5,600 women for the 1965 National Fertility Study, Bumpass and Westoff showed that about one-fifth of all births occurring from 1960 to 1965 were unwanted; eliminating these unwanted births would have reduced the fertility of these women from 3.0 to 2.5, close to a "replacement" fertility rate. This study has had a powerful effect in countering the arguments of those who asserted that investment in family planning programs and in contraceptive research would be of little value in reducing population growth. This analysis of the National Fertility Study was suggested by the Center for Family Planning Program Development, an organization devoted, *inter alia*, to linking academic scholarship to population policy formation.

Examples of social research that have influenced policy in the developing world can also be found, although much of this research has been done by foreigners and much remains to be done. KAP (knowledge-attitude-practice) studies are the most common form this research has taken, and the positive attitude toward family planning shown by almost all these studies has encouraged policy-makers to go ahead with family planning programs without fear of public opposition. But the wide gap between favorable attitudes expressed by respondents and their actual acceptance of family planning makes the results of these studies an often unrealistic guide to action. Population policy, furthermore, requires answers to broader and more complicated questions than those addressed by KAP studies. As Driver noted:

> Still unresolved are several quite basic questions: What should be the aim of a population policy? What form should it take? Will it be socially acceptable? What will be its demographic and nondemographic consequences? Complete answers to these questions require a thorough consideration of a nation's social and intellectual history, value systems, political and social institutions, economic resources and organization, population dynamics, and orientation to the future. These matters, which are beyond the competence of any single discipline, demand the attention and skills of the several social sciences and demography.[6]

Institutional Arrangements for Social Research on Population Policy

It is assumed that donor agencies should avoid intervention in the sense of attempting to influence directly or to manipulate national population policy formation and implementation; nor should the foreign donor attempt to structure research according to preconceived ideas of the specific directions that population policy should take. Donor efforts should, therefore, primarily focus on development of competence among national personnel to evaluate their country's needs and to formulate policy recommendations. Major emphasis must be given to the nurture of intellectual resources that seek to identify the determinants of fertility and other population variables and to understand the interrelations of population policy with other areas of social and economic policy.

The university must be a prime focus for attention, as it provides fundamental training for those who will engage in population research and those who will staff policy-making bodies. It should be noted, however, that, with important exceptions, research on national problems is not a highly valued or rewarded activity of faculty of university academic departments in many developing countries. Policy-relevant research is more likely to be carried out by staffs of autonomous or university-connected research institutes. The strategy of strengthening research capacity must, thus, be tailored to the particular academic institutional arrangement of a given country. As will be noted below, progress in policy-oriented research is beginning to be made in the Third World by consortia of research institutions that reach across national boundaries. Particular circumstances sometimes make it easier to encourage research by a nation's scholars by offering them opportunities for participation in international or regional research enterprises rather than by concentrating on development of individual departments or institutes.

Research output of academic departments, institutes, or consortia will not have much influence on policy decisions, however, without special attention to institutions that provide linkage between academic researchers and policy-makers. The strategic location for such institutions is in governmental bodies, especially central planning organizations. David Bell pointed out in his "Commitment of Leaders" paper for Bellagio II:

> . . . the interpretation of demographic data, the consideration of alternative population policies, and the analysis and evaluation of the impact of population policies and programs require also the attention of the central government planning organization. Such organizations have come into existence in recent

years in most countries with high rates of population growth, but few of them thus far have taken a serious sustained interest in population problems or have staff competent to deal with population issues.

Some progress toward remedying this situation through the projected establishment of population units in the planning organizations of Malaysia and Thailand is noted below. Bell goes on to say that:

> Each country needs research and analysis capacity, not only in government, but outside it as well, to provide a continuous capacity for critical judgment, for independent research, and for alternative policy judgments.

Thus there remains an important function for policy-relevant research by the university or research institute staff member who can publish his recommendations without the need to conform to current government policy. But for research to be of use to policy-makers, it must be formulated in policy terms. As Berelson puts it in his "Population Policy" paper cited above:

> . . . it may be useful to make a distinction between . . . the objective of contributing to knowledge (theory or methodology) and the objective of "solving" a problem, between reaching generalizations and treating individual cases, between deferring conclusions in the presence of uncertainty and reaching decisions despite uncertainty, between a reference group of scholars and a reference group of practical administrators, between rewards for insight or technical achievement and rewards for implementable results.

The population unit within government must, therefore, have the capacity to translate academic research into policy terms and to commission needed research to help define policy issues.

Examples of Progress

In the months since Bellagio II, there has been encouraging progress in the development of social research on population policy, although in terms of what is needed the surface has only been scratched. The following pages are not intended to describe all that is going on, but to point up some of the more interesting activities in the three developing continents that may serve as models for adaptation elsewhere.

Latin America

In Latin America, largely as a consequence of long-term efforts of donors to build capability in the disciplines of economics and sociology and to a lesser extent in political science and anthropology, there are now relatively well-established social research centers and institutes in a number of countries. Social scientists in these institutions have applied their research to a variety of development problems, including a significant amount of work on population dynamics. As a result of planning and staff work carried out almost entirely by Latin American social scientists, a consortium of eight Latin American research centers[7] has been formed to undertake a major program of comparative social research on problems relevant to the formulation of national population policies. The program will function under the aegis of the Latin American Social Science Council (CLACSO) and will be coordinated by a multidisciplinary team of social scientists headquartered at the Latin American Demographic Center (CELADE) in Santiago, Chile. Funds for the first two years of the research program have been pledged by UNFPA, The Rockefeller Foundation, The Population Council, The International Development Research Centre (IDRC of Canada), and The Ford Foundation.

The consortium has drawn up a set of basic research priorities for the first years of the program. Initially, research will focus on the fundamental relations between population dynamics and such variables as the labor market, income distribution, national ideology, social structure, and urban and regional development and patterns of rural organization. The second stage of the program will focus on "diagnostic" research themes, attempting to measure the factors that most directly affect fertility, mortality, and internal migration. Subsequently, attention will shift to an evaluation of policies that affect population variables with an emphasis on specific case studies.

Asia

On a relative basis, Asia is considerably less rich than Latin America in social scientists and social science research institutions currently or potentially interested in work on population policy questions. Examination of social science research activities in Asian universities indicates that, with some outstanding exceptions, there is not extensive policy-relevant research activity in population or in other fields. While there is a large cadre of faculty members holding advanced degrees in the social sciences, few of these individuals carry out problem-related social science research as part of their university faculty duties. This was evident from a meeting of representatives of twenty leading Asian universities who discussed the university's role in population policy in Jogjakarta, Indonesia, in April, 1972. As reported by Paul Demeny,[8] the conference recognized the "disparity between the strong emphasis put on population problems by Asian governments and the meager weight given the study of population in most universities in the region." Representatives of the universities resisted the possibility of being drawn into the monitoring and evaluation of ongoing family planning programs, preferring instead research on the socioeconomic determinants of family size and the development of programs designed to alter the motivation for large families. Conference participants agreed that they should apply their resources more vigorously to social problems and discussed strategies for exposing their students to demographic concerns in their course work and to the possibility of some of the institutions developing major multidisciplinary centers for population research. While noting that the dynamics of fertility trends would be the primary focus of most population policy-oriented research in Asian countries, concerns with urbanization and internal migration were also recognized as falling at least partly within the scope of population policy.

Viewing the situation in Indonesia, Gavin Jones, the Population Council's demographer-economist who is serving as a consultant to the University of Indonesia's Demographic Institute, notes that in Indonesia "there is an enormous need for every kind of research in population from the estimation of basic demographic parameters for the country as a whole to the investigation of the psychological, sociological, and economic factors responsible for family size preferences."[9] He points out that considerable population data have been collected, but are unprocessed and unanalyzed. He half-jokingly suggests a two-year moratorium on further data collection in order to allow fuller analysis of materials already collected. He sees need for:

> . . . projections to set the broad picture in which population policy must operate: what will be the trends in rural and urban population in Java, given alternate population trends and economic development strategies? What are the implications of these trends for farmers' incomes and income distribution? What urbanization trends can be expected and on what cities and regions is a rapid urban growth likely to be focussed? What are the implications for education and health planning of alternative population trends?

Focusing on "fertility reduction-oriented research," Jones asserts:

> . . . we are clearly facing a situation here in which the national interest requires that fertility be reduced among a population more rural, more tradition-bound, poorer, less healthy, and less educated than any place where the family planning "successes" have taken place. Our ignorance about what can be done to reduce fertility in such a situation is only too obvious. How much difference would lowering infant mortality make? Raising educational levels? Introducing some kind of social security program? I feel that we need much more family-level research into this: trying to identify first how much rational decision-making enters into the process of children-production by villagers; and to the extent that it is a rational process, under what conditions can people reasonably be expected to reduce their family size preferences, and, in turn, their actual production of children.

In an attempt to approach some of these problems, a recently organized initiative for collaborative research in Asia, focusing on the value of children, has been organized by James Fawcett, a social psychologist at the East-West Center, and funded jointly by AID, IDRC, and the Ford Foundation. This involves social science research institutes in five Asian countries in addition to Hawaii: the Behavioral Science Study Group in Population at National Taiwan University, the Institute of Population Studies of Chulalongkorn University, the Family Planning Federation of Japan, the Korean Institute for Research in the Behavioral Sciences, and the University of the Philippines. By surveying parents in these respective countries, the research will test hypotheses about relationships between perceived satisfactions and costs of children and fertility. This project might contribute to the development of greater research capability in a number of Asian institutions and perhaps lead to the establishment of an ongoing international network for comparative social research on population policy issues.

Two older organizations engaged in comparative research on policy-relevant topics in Asia are models that invite replication. One is the Organization of Demographic Associates, created in 1965 as an alliance of population centers with teaching, research, or action programs in Southeast Asia. ODA comprises seven Asian centers—in Korea, Taiwan, the Philippines, Indonesia, Thailand, Singapore, and Malaysia—and three cooperating centers in Japan and the United States. Research planning on common problems is undertaken through frequent workshops for specialists from the several centers. Topics include international migration and population redistribution, household and family structure, and manpower and the labor force.

The moving spirits behind the establishment of ODA, professors You Poh Seng of the University of Singapore's Economic Research Center, Mercedes Concepción of the University of the Philippines Population Institute, and Philip Hauser of the University of Chicago, have with others organized a Council for Asian Manpower Studies (CAMS) concerned with studies of employment in Asia, with institutional membership extensively overlapping ODA's. Both organizations have been collaborating in manpower and labor force studies. Steps are going forward to provide a permanent administrative structure for CAMS with both government representatives and academics serving on its executive committee. Other CAMS interests are "employment generating projects," employment and education, trade policy and employment, and technology and employment.

As mentioned earlier, a possible prototype of linkage between policy-makers and social science researchers is the establishment of a population planning unit as part of the government of Malaysia's Economic Planning Unit. The purpose of this unit is to generate and organize knowledge about population variables and, in collaboration with other groups responsible for the planning process, to use that knowledge to forecast future trends and conditions useful for formulating alternative development policy and program options. While the major connection of this unit would be with the central statistical office whose responsibility it is to collect basic demographic data, the unit would have strong links also with universities and other research organizations, in order to identify types of research needed and to contract to get it done. Thus, in addition to the traditional role of providing population data to be used as independent variables in the planning process, the unit should be in a position to formulate alternate strategies and tactics for implementing population policies, as well as to anticipate likely consequences of population trends.[10]

Similarly, a manpower and planning cell has been proposed for the National Economic and Social Development Board of Thailand. According to preliminary plans, it would develop population data for the planning process (e.g., health needs, school enrollment projections) and would assess the way in which economic plans influence population changes in the country.

Africa

Of the three developing continents, there is least activity in the social sciences and population policy in Africa. In sub-Saharan Africa social science research in general and population research in particular are still undertaken primarily by expatriate academics, although there is a growing number of African scholars engaged in this work. A tabulation of 64 population research projects under way in 20 countries on the continent of Africa at the end of 1970 revealed that of 66 principal investigators, 46 were expatriates. This tabulation does include a number of population policy studies undertaken by African scholars, particularly relating to internal migration, nuptiality and kinship, and impact of population growth and pressure. A number of geographers are prominent in demographic research in this listing.[11]

Population research is being introduced into a few university-connected institutes that regularly undertake contract research on economic and social problems for government. Examples are the Nigerian Institute of Social and Economic Research of the University of Ibadan, the Human Resources Research Unit of the University of Lagos, and the Institute for Development Studies of the University of Nairobi. Institute staff members are typically university-appointed, with complete or partial government funding, and thus there is close linkage between university scholars on the one hand and government policy-making on the other. In Africa, moreover, it is not uncommon for university faculty to move in and out of government policy-making positions, thus providing direct and personal linkage between research and policy.

Some 120 research and training institutions in 38 African countries participate in CODESRIA (Conference of Directors of Economic and Social Research Institutions in Africa), an organization designed to coordinate research in the social sciences. Its executive committee has chosen four broad areas for policy-oriented research, one of which is "population policy and economic development." Sixteen members of CODESRIA have chosen to participate in this area, which is defined to include: "population policies and family planning programs; demographic gap and demographic transition; manpower, education, health and development; and migration." UNFPA is supporting a series of seminars sponsored by CODESRIA for experts from all parts of Africa, on the basis of which a volume will be prepared entitled "Population Research Policy for Africa."

It is by no means certain that attention to population policy by African social scientists (or those in other regions, for that matter) will result in prescriptions directed toward the reduction of population growth. At the 1971 African Population Conference in Accra, a group of scholars primarily from Francophone Africa endorsed a paper by Pierre Pradervand of the American Friends Service Committee that questioned the ideological framework in which population control is encouraged by ex-colonial donors, recommending instead a series of prescriptions for economic and social reform directed primarily at removing vestiges of the colonial past and accepting family planning only as a measure for the health and welfare of the individual mother and child.[12]

International Population Policy Programs

The last two or three years have seen the establishment and growth of a number of programs developed by U.S. academics or donor agencies that are designed to encourage social and legal research on population policy by scholars throughout the world. Some of the more interesting are described below.

International Seminars in Policy Analysis is a series sponsored by the National Academy of Sciences and funded by AID. The first of five regional seminars for South Asians was held in Colombo in February, 1973. Subsequent seminars are planned for the Middle East, Latin America, Africa, and Southeast Asia. Each seminar is sponsored by a prestigious organization in the region. Participation in the seminars is confined to citizens of the region, not primarily academics, but architects, planners, and similar professionals whose work is affected by population considerations. A volume summarizing the discussions will be prepared by an international committee.

Professor Luke Lee of the Fletcher School joined with legal scholars in the developing world in an international network of Law and Population Projects. Under this program, existing statutes, regulations, decrees, and laws with a direct or indirect effect on population policy are being compiled and model codes of law drawn up that would protect "human rights" as enunciated by several United Nations declarations, including "the right to adequate education and information on family planning and the right of access to the means of practicing family planning."[13] Twenty-eight country projects are now under way with support from UNFPA and IPPF. An international symposium on law and population involving ministers of justice as well as professors of law to discuss the results of these studies is planned for 1974.

Political scientists at the University of North Carolina and Third World colleagues have formed an International Population Policy Consortium to encourage political science attention to population policy. IPPC held its most recent annual meeting in October, 1972, in Dubrovnik under the chairmanship of Dr. Paulo Novosel, a Yugoslav political scientist. The meeting was attended by social scientists from Brazil, Chile, Mexico, Senegal, Indonesia, Nigeria, and the United States. IPPC encourages systematic research on population policy questions, focusing first on elite roles in population policy processes. IPPC plans a series of policy development seminars, the purpose of which is to expose policy-makers to research activities in population policy. A number of Third World scholars who participate in the consortium also are involved in other policy research networks. Thus, the consortium may afford an opportunity for communication among the leading figures in policy research on a worldwide basis.

Under an AID contract, the Smithsonian Institution has assembled a staff of social scientists to run an International Program for Population Analysis, described as "an interdisciplinary program of analysis and evaluation of population dynamics designed to increase and diffuse knowledge useful to less developed countries in formulating effective population policies, especially in Third World Countries." Under this program, individuals (but not institutions) in the developing world are invited to submit proposals for short-term research projects running from three months to one year under a $50,000 ceiling. Emphasis is placed on study leading to modification of existing population policy in the short run. A series of seminars involving those engaged in the studies is also planned.

For the past three years, the Ford and Rockefeller foundations have jointly sponsored a program of social science and legal research on population policy. Research proposals are received from people in all parts of the world, and grants up to $50,000 in amount and two years in term are awarded on a competitive basis. All entries from the developing world as well as from Europe and the United States are judged on a common standard of scientific quality and of relevance and importance to population policy. In the first three years, an average of 250 submissions a year have been received from some 36 countries, of which about 10 percent have been funded. While slightly over half of the awards in the first two years went to the United States, there were winners also from Brazil, Chile, Colombia, Nigeria, Korea, the Philippines, and Turkey. It is too early to evaluate the research product of the winners of the competition, but it is clear that the program has been especially effective in encouraging research on population policy by scholars not previously active in the population field. The program has also catalyzed establishment of similar competitions in Brazil, to be judged by Brazilian scholars, and in Southeast Asia. The latter would be directed especially to younger social scientists who normally would not participate in international competitions. A system of "mentors" in which senior social scientists in the region would help their younger colleagues with research design and implementation is to be built into the program. The Brazilian program is financed by the Ford Foundation. The Southeast Asian competition may be jointly financed by IDRC and the Ford Foundation.

Thus, there is a substantial array of policy-relevant research and discussion going on under the aegis of several international programs. To the extent that they are perceived not as attempts to impose policy prescriptions by the donor agencies, but as opportunities for objective examination of population policy issues, these programs would stimulate increased attention to such policy and raise the consciousness of the academic and policy-making communities with respect to the salience of population questions. It is recognized, of course, that these international programs are no substitute for sustained, entirely indigenous efforts to study the interrelationships of population and economic, social, and political variables.

Action Research on Population Policy

The main focus of this report has been on social science research as it may influence population policy. Scholarly examination of the economic, social, and institutional environments that affect the desire for children or preference for migration can and has developed a plethora of hypotheses:

> . . . the principal bottleneck is not absence of hypotheses, rather it is the absence of data to test these hypotheses and of ideas about how to incorporate these hypotheses in practical policy proposals. . . . In many cases the only way to obtain useful and convincing evidence on the validity of some of

these hypotheses is to test them in field experiments. One cannot hope to discover how parents will react to an old age pension scheme ... without actually presenting them with such a scheme and observing their behavior.[14]

At least two such field experiments are now under way, one offering savings accounts to couples who limit their fertility in the tea estates of south India, and the other offering an educational bond for couples with small families in a township in Taiwan.[15] Both of these programs originated through the initiative of assistance agency personnel, the tea estate plan by Ronald Ridker, then with AID, the educational bond scheme by David Finnigan, then with the Population Council. Crucial to the implementation of both is the enthusiastic involvement of local administrative authorities. Such field experiments are valuable only to the extent that they contain rigorous evaluation mechanisms, not only to keep track of costs and administrative problems, but to measure effect on attitudes and behavior of participants.

The establishment of such field experiments on a large scale over a long period of time is extremely delicate and difficult, especially when promoted by outsiders, and there is need, therefore, to seize every opportunity to study the effect of "natural experiments" relevant to population policy. The most important of these as it may affect fertility has been instituted by the government of Singapore. In a recent decision, Singapore now gives highest priority in public housing to families with two or fewer children; lower priority to those with three children; while those with more than three have the lowest priority. Tax exemptions are extended only to the first three children (formerly five); and after August 1, 1973, maternity leaves and benefits for government employees and those provided by government insurance will cover only the first two confinements. Surely an indigenous research institution should study the political, economic, and demographic effects of these measures over a period of years, but such a research program does not seem to have been started.

Recommendations

The central recommendation of this report is based on a recognition that the population problem is by its nature long-term and cannot be "solved" by quick remedies. It is recommended that donor agencies concerned with population policy should encourage the substantial increase of social science competence throughout the developing world, for work not only on population problems, but on the entire spectrum of development problems. Note that this is not a plea for a larger supply of population specialists, although a good case can be made for this in other contexts. The need here is for broadly trained social scientists—economists, political scientists, social psychologists, anthropologists—who can analyze empirical data, including population data, on issues of relevance to development policy. Questions of population dynamics are intimately entangled with issues in all sectors of development. Social scientists who can handle these complicated interrelationships are in tightest supply.

Where there is a relatively large cadre of well-trained, problem-oriented social scientists in place, as in Latin America, major programs of research on population policy—and for that matter on all other questions of development—are more easily established than in regions where such competence is lacking.[16] Although in Asia in particular there are large numbers of individuals with graduate degrees in the social sciences, there is only a thin layer of competent scholars available for policy-oriented research. In Africa, the supply of such individuals is even more meager. The same handful of distinguished social scientists is under extreme pressure to participate in a whole host of research activities related to a variety of development problems.

The traditional means of developing competence—doctoral fellowships for study abroad—is not the whole answer. There is need to build appropriate institutions in the developing world that offer rewarding careers to outstanding social scientists in the conduct of policy-relevant research on a variety of topics. (It is easier for donor agencies to augment the *supply* of trained personnel; the harder task is to assure *demand* for those trained.) In some countries, development of university departments is a promising approach to increased policy research output; in others, it may be more appropriate to focus on research institutes, either university-connected or free standing. Donors should examine the situation on a country-by-country basis through patient staff work by resident social scientists, not by quick visits of outside "experts." They should be prepared for a long-term commitment to the nurture of institutions that are directed not only to population research, but to a variety of development problems, of which population policy is a salient element. As defined in this report, population policy embraces not only family planning and measures "beyond family planning" designed to bring down the birthrate, but is intimately related with most of the major economic, political, and social issues facing the nation.

The results of academic research will not automatically be used by policy-makers. Publishing research results in policy terms, and conferences bringing government officials together with academics, are often useful. For continuing effectiveness, however, there is a need to institutionalize the linkages between academic research and the governmental policy process. As indicated above, one promising model is the Population Unit to be established in the Economic Planning Unit of the Government of Malaysia; another is the manpower and planning cell under consideration by Thailand's National Economic and Social Development Board. These should serve as mechanisms through which the policy-maker can specify the kinds of information that he requires and can have it stated in policy terms that outline "alternative approaches ... specifying potential differences in the intention, effect, and costs of various programs."[17]

Units in central planning agencies are not the only examples of linkage mechanisms. Recalling David Bell's assertion of the need for "continuous capacity for critical judgment, for independent research, and for alternative policy judgment" outside of government, an ideal model would be a strong private institution such as the Brookings Institution or, on the U.S. population/family planning scene, the Center for Family Planning Program Development, which offers to government independent policy analysis, but is not bound by the constraints of current government policy.

Continued encouragement also should be given to building international networks of institutions and individuals engaged in population policy research and to bringing together policy-makers and scholars for discussions of mutual interest. The several donor-sponsored programs of research grants and conferences are useful in stimulating interest in population policy. They would be counterproductive, however, if they were to be perceived as attempts by outsiders to influence the direction of population policy, or if they siphon off national talent to largely international concerns. They are useful to the extent that they stimulate sustained attention to a nation's own population problems by its own scholars and policy-makers.

Initiation and financial support of action-research projects such as the Indian tea estate savings plan and the Taiwan savings bond scheme that reward low fertility raise problems of propriety

for outside donors. Such field experiments offer intriguing opportunities to test policy hypotheses, but each agency must carefully determine for itself the conditions under which it will become involved in implementing such plans. It should be noted that experiments of this nature cannot be established without the wholehearted support of the relevant host government officials and willingness to participate by the population affected; many donor agencies should find these satisfactory conditions for their support. The assistance agency and its staff may be able to make special contributions through encouragement of adequate evaluation, the results of which are the *raison d'être* for the experiments. Where nations decide on their own to make policy decisions designed to affect population dynamics, as in the Singapore case, the "population community" might encourage continuous competent study of the effects of such actions.

1. Progress in implementing this strategy is discussed in AID's paper on institution building submitted to Bellagio III.

2. In following up on this point, Ford Foundation staff undertook to build rosters of institutions and scholars in each of three developing continents to identify centers of strength that could be capitalized upon for population research and training. Except as a preliminary map for further on-the-ground exploration, we concluded that this exercise was not very useful. Information gathered becomes quickly out of date. A simple listing of institutions and their staffs, without evaluation of their capacity to carry out relevant research, is not a sufficient basis for taking action, while a document containing opinions of institutional and staff quality is of dubious reliability and propriety. It appears, therefore, that staff work for institution building in the social sciences must be undertaken by experienced social scientists on the ground with current, firsthand knowledge of institutional and professional capacities in the host country.

3. *Population and the American Future*, The Report of the Commission on Population Growth and the American Future, Washington, D.C., U.S. Government Printing Office, 1972, p. 40.

4. *Population and the American Future*, p. 85.

5. L. Bumpass and C. Westoff, "The Perfect Contraceptive Population: Extent and Implications of Unwanted Fertility in the U.S.," *Science*, 169: September 4, 1970.

6. "The Social Sciences and Population Policy: A Survey," *Annals of the New York Academy of Sciences*, vol. 172 (12), October 27, 1971, pp. 441–478.

7. The eight founding members of the consortium are: the Center of Urban and Regional Studies, di Tella Institute, Buenos Aires; Brazilian Center of Analysis and Planning (CEBRAP), São Paulo; Center for Studies of Population Dynamics (CEDIP), University of São Paulo; CELADE; Latin American Faculty of Social Sciences (FLACSO), Santiago; Division of Population Studies of the Colombian Association of Medical Faculties (ASCOFAME); Center for Economic and Demographic Studies (CEED) of the College of Mexico; and Institute of Social Research of the National University of Mexico.

8. "Asian Universities and Population Policy," *Studies in Family Planning*, 3:10, October, 1972, pp. 249–250.

9. Personal correspondence, January 4, 1973.

10. See Lyle Saunders and J. G. Hardee, "Rationale and Suggestions for Establishing a Population Planning Unit: Malaysia," a paper prepared for the government of Malaysia, August, 1972.

11. David Radel, "Current Population and Family Planning Research in Sub-Saharan Africa: Systematic Information on 64 Projects," *Rural Africana*, Spring, 1971.

12. Pierre Pradervand, "The Ideological Premises of Western Research in the Field of Population Policy," presented to African Population Conference, Accra, Ghana, December 9–10, 1971.

13. Quoted in L. Lee, "Law, Human Rights and Population," *Virginia Journal of International Law*, 12:3, 1972, p. 318.

14. Quoted by permission from unpublished memorandum, Ronald Ridker, "RFF's Work on the Determinants and Consequences of Population Growth. A Proposed Program," February, 1973.

15. For descriptions of these programs, see R. Ridker, "Savings Accounts for Family Planning, An Illustration from the Tea Estates of India," *Studies in Family Planning*, July, 1971; and O. D. Finnigan and T. H. Sun, "Planning, Starting, and Operating an Educational Incentives Project," *Studies in Family Planning*, January, 1972.

16. The supply of such social scientists in Latin America is, nonetheless, far from optimal.

17. A. Etzioni, "Policy Research," quoted by Berelson, *op. cit.*

UNIVERSITY PROGRAMS AND POPULATION CENTERS

Jarold A. Kieffer

Introduction

Earlier Bellagio meetings discussed institution building and the need to develop LDC capacity for the support of country programs. Much of this discussion focused on universities and population centers. Since the term "institution building" refers to the goal and process of almost all development effort, the title of this year's paper has been changed to focus specifically on universities as one type of institution. An addendum to this paper contains a brief statement concerning the definition and use of the terms "institution" and "institution building" as used by the AID Office of Population.

Functions of Universities and Population Centers

The universities and population centers have a role to play in the direct and indirect support of a country's population/family planning programs. There are six support functions that universities can help perform: training (both academic and practical); research (including applied research, policy research, and basic research); data collection and analysis for both policy and programming uses; technical advisory services; program evaluation and feedback; and the provision of information and knowledge storage and retrieval services. Not all universities can or should provide all these services, but most country programs should have some way of obtaining these services.

Nature of the Need

The ideal arrangement in establishing a university program or population center is to do so in close collaboration with the operational institutions that it is to serve. While many indirect services are beneficial, such as educating the future leaders of the country and influencing the current leadership on policy and program matters, these contributions would be strengthened to the degree they are tempered by the realities facing those who have responsibility for the action program. Therefore, it is essential that the universities develop a working relationship with the personnel who are conducting the operations.

The Population Council's summary of existing capacity in Africa, the Middle East, and Asia, prepared for Bellagio II, demonstrated conclusively that university programs and population centers are either nonexistent or inadequate to perform the necessary tasks in support of national population/family planning programs. Out of 40 African countries surveyed, only four had universities that offered five or more courses in population/family planning. In the Middle East, out of 13 countries surveyed, only two were designated as having a high training capacity in demography, with 14 or more courses, and only two countries offered as many as three courses in family planning. In Asia only three countries out of 21 surveyed had as many as 6 full-time courses at the university level in family planning, and 7 had 7 or more full-time university courses in demography.

A recently completed survey of Latin American universities shows that the situation in that region is similarly weak with regard to university capacity in the population field. However, most medical schools have been receiving assistance through the Pan American Federation of Medical Schools for developing training and research programs in demography.

Every major population/family planning program in an LDC requires strong institutional support if it is to operate at top-level efficiency and effectiveness. The staff functions of research and training must be provided within the country and at a sufficiently decentralized level to be tied in realistically with the local circumstances within which the program operates. Data collection and analysis for policy and programming uses are best performed by indigenous investigators with a minimum of outside assistance. Technical assistance to operational personnel can be provided more realistically, less expensively, and with greater continuity by indigenous experts, provided they are available, than it can by outsiders. Clearinghouse services providing information and knowledge in the country's own language(s) are obviously of greater utility if available within the country rather than outside.

One of the greatest contributions that assistance agencies can make to the performance and independence of less developed countries is to help them build the institutional capacity required for conducting their own affairs without outside help. A good way to do this is to provide necessary amounts of resources over an agreed time period during which the outside assistance builds up to a peak and gradually phases down to zero, at which point the entire activity is being conducted by the country itself and there is no longer any need for outside resources. This type of institution building is a *sine qua non* of development. It is also of extreme importance that the functions to be performed by these institutions be meaningfully linked to the resolution of problems facing the action agencies in the country. To date, very few, *if any*, developing countries have developed the required institutional support for their population/family planning programs.

The needs for the development of national institutions that can employ their own professional talent and serve their own country interests are sufficiently great that national development should take precedence over efforts to build regional, international, or worldwide institutions that by their very nature are not country specific and serve to drain away needed manpower from country programs.

Principles of Institution Building

Donor assistance to build university programs or other institutional arrangements would be facilitated if agreement could be reached on the fundamental principles to follow in making this type of assistance available. The following suggestions are offered for consideration.

1. A comprehensive plan including long-term and short-range objectives should be developed jointly. This plan should indicate total budgetary requirements and identify the sources of funds on a year-by-year basis. The plan should receive official endorsement from those authorities authorized to commit funds on behalf of the university and the donor agency.

2. The funding plan showing donor contributions should probably approximate a bell-shaped curve with contributions starting gradually, building up to a maximum, and then tapering off. The university funds would more nearly be represented by an S-shaped curve, starting out modestly and building up by increasing amounts to a total that then levels off. Appendix 3 provides a hypothetical funding model for institutional development showing LDC and donor agency allocations over time.

3. Build the institution around a strong leader who will give emphasis to staff development as a means of providing strength and continuity.

4. Where feasible, develop a sister institution relationship with an intermediary university that has the confidence of the LDC institution, but do not limit all contacts or inputs to this one intermediary.

5. A minimum commitment on the part of the donor agency for at least five years and preferably 10 is required for sound development and to withstand the political and budgetary ups and downs that are likely to occur.

6. Relate the program to the immediate and long-term needs of the country and especially to the solution of problems being faced by the operating agencies.

7. Attempt, if possible, to involve the operating agencies in the decision-making arrangements where program activities are decided and in the financial support of activities that serve their needs.

8. Avoid the payment of salaries and the support of activities beyond what is realistically possible for the university to continue or to obtain from other sources once support is withdrawn.

9. Attempt to repatriate national talent and aim at developing professional independence at the earliest possible moment.

10. When funds are committed for training staff members, be sure steps are taken to provide a meaningful job for them when they return and that they have the essential equipment, supplies, funds, library resources, and assistants to be professionally productive.

11. In addition to providing assistance in the substantive areas, it is important to consider the management and administrative components if the program is to run well. Often special consultants skilled in the management sciences will be required to handle this aspect of the work.

12. To avoid unnecessary attacks and to gain cooperation and support, involve the relevant members of the power structure as well as those who will be directly affected in the planning and implementation of the program.

13. Be sure to develop and have a clear understanding about the purpose for which the institution is being built. If agreement and commitment cannot be reached concerning purpose, there is little reason to proceed.

14. To assess progress and to revise original plans, a yearly work plan should be developed and yearly review sessions held to report accomplishments and shortfalls on the basis of which the next yearly work plan should be developed.

Activities Under Way

Since the last Bellagio meeting, in June, 1971, several actions have been funded by AID that are now getting under way. Funds were made available to the Population Council to assist LDC universities in the planning and management of their institutional development activities in population/family planning. Initial emphasis will be given to Africa, where the Population Council now has a regional adviser funded by this project. Once institutional plans are drawn up, there will be a need for additional outside funds to support the implementation of these programs. Implementation funds are not included in the Population Council's grant. The first project now under funding consideration is a proposal to establish a program in demography at the University of Zaïre at Kinshasa. In conjunction with this grant, a coordinating mechanism has been established in which semiannual meetings of all donor and intermediary organizations involved in university development come together to discuss current activities and future plans. Hopefully, these meetings, which are to be hosted on a rotating basis, will prevent duplication of effort and also give attention to the more substantive issues of the kinds of institutions needed, where they are needed, and how to build them.

Another grant was made to the University of North Carolina to help establish four African centers for the teaching of demography. These centers are to be dispersed geographically and culturally to provide one for North Africa, one for East Africa, one for Anglophone West Africa, and one for Francophone West Africa. The first of these has been initiated at the University of Ghana, and site selection is being pursued for the remaining three centers in Kenya, Ivory Coast, and Tunisia. Another grant to a consortium of U.S. universities led by North Carolina made a survey of the needs for family planning courses in the health training institutions throughout Africa. Funds for a contract to help these institutions to develop and teach such courses are now being considered.

Another major effort at university development was undertaken recently by AID when the University of North Carolina was funded to help universities and other institutions to develop their own programs relating to population/family planning. Under this arrangement, which we may expand to include the universities of Michigan, Johns Hopkins, and Hawaii, the U.S. university develops a sister-to-sister institution relationship with a number of universities in different countries. After initial planning and host country commitments are made, a proposal is submitted to AID for funding consideration. Through this mechanism, we hope to assist 10 to 12 universities to establish population programs during the next couple of years.

A relatively small contract with the University of North Carolina entitled University Population Program Development was funded to (1) review the "state of the art" vis-à-vis university institution building, (2) suggest guidelines for improving the methods used for institution building, and (3) establish a network of linkages among universities in different countries for the sharing of information and mutual assistance in working on common problems. To date, 25 university program directors in 14 countries in Africa, Asia, Latin America, and the United States are participating in the network, and eight university heads have agreed to serve on the steering committee to guide program development.[1] The analysis thus far suggests that relating university activities to the

needs of the operating institutions will be an extremely difficult task. Out of a list of 20 activities, those ranked in the bottom five in terms of time and other resources spent on them were prototype service programs, training operating staff for agencies, exchange programs for faculty and practitioners, mid-career professional education, and training teachers to teach population education in schools. It is apparent that the universities see their role in providing indirect services through basic research and teaching. The five most important activities identified by the study were policy research and commentaries, basic disciplinary research and teaching, developing data base for population studies, documentation services and population services to students. It should also be noted that interdisciplinary or multidisciplinary activities, considered essential by most qualified observers for a problem-solving approach, ranked at the bottom of the list.

This analysis suggests two approaches for building direct institutional backstopping for operating programs. One approach is for donor agencies to provide sufficient funds for universities to develop strong interdisciplinary service-oriented programs. There are three hazards associated with this approach that both donor agencies and recipient institutions should be aware of. First, the university is being asked to take on roles and functions for which it is neither structured nor historically prepared to perform. Thus, a basic reordering of values and structure is necessary if the direct service role is to be effective. This often will be fraught with difficulties and resistances involving the power structure and leading personalities of the university. The job can be done, but it will not be easy or inexpensive. Second, it is not likely that universities will be able to absorb the cost of providing direct services, and thus the donor agencies and/or the service recipients must be prepared to finance the services provided on a continuing basis. The principle involved here is that if an outside agency requests another institution to do a job for it, then it becomes the employer and must continue to pay for the services as long as it needs them and will also be expected to pay for the close-out costs when it decides it no longer needs the service for which the university is providing staff, equipment, space, and other facilities. The third hazard of building new functions into existing structures involves a complex set of relationships and perceptions about the job to be done and the best way to go about doing it. There are apt to be communication gaps and large areas of disagreement about how best to tackle the service job. The action agencies and donors want practical results and direct services aimed at getting the job done. Staff employed by a university will seek academic appointments, prestige, and professional advancement that are associated with basic research, teaching, and publication. Since prestige and advancement will rest in the university system, professional behavior will be molded by the values of the university rather than the values of the operating agency that is being served—even though that is where the money comes from. Because of this, staff will be willing to work only part-time on matters of agency interest, and often the time devoted to agency work will not be governed by the needs of the job to be done but by teaching and other academic commitments that are put first. Thus, the structure of a university prevents an action- or mission-oriented approach.

Another approach for building the necessary backstopping is to build the needed institution independent of any existing structure. For economy and other advantages, such an institute might be attached to a university, but administratively it would be separate. The advantages of this arrangement are that the institute created has no competing loyalties, the staff can be brought together to do interdisciplinary problem-solving work on a full-time basis, and greater responsiveness to agency needs is possible to achieve. The costs will be long-range in nature and must be borne entirely by the action and donor agencies. It is possible that this approach also may involve the provision of funds for facilities. The absolute costs may be greater than those incurred by incorporating service functions within a university, but the costs relative to usable outputs may be less.

It is recommended that donors give serious consideration to assisting a small number of less developed countries establish national population centers designed to provide direct services to the operational institutions such as the Ministry of Health. Funding for universities should be aimed primarily at assisting them to perform their traditional roles of teaching and research, which can be justified for their indirect contribution to solving the population problems of the country.

Since at this time there are no independent national centers performing the needed support services, it would be useful and at the same time of historical significance if such a center could be established through the collaboration and joint funding of the donor agencies.

Two centers along the line being recommended were included in the IBRD loan to India in June, 1972. These two centers, one in Lucknow and one in Bangalore, are intended to supply meaningful management information, provide for program evaluation, respond to operational questions, perform research on demand, and recommend program improvements. A careful assessment of this type of support institution and the use of loan funds to build it would provide important lessons for the future.

Since the last Bellagio meeting, a book of readings aimed at examining the feasibility of organizing institutions to deal with the population problem was published under the joint editorship of Sylvan J. Kaplan and Robert K. McCormick. This work, published by Charles C. Thomas, entitled *Innovative Organization for Population Research*, contains 33 articles that weigh the pros and cons of institution building both inside universities and outside them, of private organizations and public organizations, and of disciplinary versus interdisciplinary approaches. While such diverse treatment can provide no definitive answers, there is much to provoke thought and controversy about how best to go about the business of institution building for problem solving. It was designed to help donors as well as those who inhabit and use the support institutions in going about their work more intelligently and contains many insights and surprises.

Agenda for Future Action

Most donors and intermediaries are planning to continue assistance for the development of university programs and centers in the less developed countries. Appendix 2 provides a list by institution and country where some current interests lie.

Most of what is being done today and what is proposed for the future is the result of opportunities that arise as a result of discussions and professional contacts. There are no overall country strategies that describe in detail (1) the functions that need to be performed in support of population/family planning programs; (2) the number and types of personnel needed to perform these functions; (3) the institutions required to perform these functions; (4) the amount of funds and duration of time required to build and staff the necessary institutions; and (5) the amount, type, and duration of outside assistance required.

This past year, a coordinating committee was established with the participation of a number of donors and intermediaries.[2] This

serves as a clearinghouse and information channel for coordination purposes. It may move into the more substantive issues concerning the principles of institution building, but without formal agreement it will be unable to address itself meaningfully to questions concerning the purpose for which institutions ought to be built, or the type and location of such institutions.

With the amount of effort now under way, some of which goes back ten years, it would appear useful to do two things during the next year or 18 months. First, an analysis should be made and agreement reached on the types of support functions that population/family planning efforts need to have performed. Second, an assessment should be made of the contributions that existing university programs are making to country population/family planning programs. Third, the gaps should be identified where action is needed and a decision reached whether a university program or some other institution needs to be built and, fourth, a number of proposals should be developed with host country nationals for possible joint funding by a number of donors.

If this were done, a significant step forward would have been taken in the more efficient and intelligent utilization of the resources available for population assistance, and the art of international development would certainly be improved materially.

Problems

Throughout this paper, a number of problems associated with institutional development have been identified. Some of the more important ones deserve special attention.

Coordination

Due to the number of agencies involved and the somewhat limited number of universities with a capacity for using assistance funds well, there is a tendency for donors to court the same institutions. There is also a tendency for the universities to court more than one donor and often simultaneously. The recently established coordinating committee will help prevent serious duplication of effort and competition, but we still need an early warning and information system that would allow each agency to know at any given time what contacts and overtures are being made. This problem should be addressed by the coordinating committee at its next meeting.

Availability of Talent

It is precisely because the availability of talent is so scarce in the LDC's that the problem of coordination is so important. Attention needs to be given to the problem of strengthening and broadening the existing base of professional expertise. Steps need to be taken to (1) reduce the out-migration of scarce talent, (2) repatriate talent from abroad, and (3) train additional manpower as rapidly as possible.

Funding

Building institutions at the university level or otherwise requires large outlays of funds over long time periods. At a modest level of development, the cost of supporting five LDC university professors with related assistants and with enough research money, equipment, and library resources to be optimally productive would require about $185,000 per year exclusive of capital outlays, major equipment or technical assistance. Total funds from the donor agencies of $10 million to $15 million per year for university development would not appear unreasonable when the number of countries and institutions involved are considered.

Donor Confidence

A good deal of assistance funds flow through intermediaries who must have staff to handle funds and provide technical expertise, which is often expensive and inefficient, but is sometimes necessary because of political considerations. It is often done because it is easier than burdening the donor agency staff and because of a lack of confidence in the ability of the LDC to manage funds properly. It should be possible to find individuals and institutions that warrant donor confidence and trust. In those cases, assistance should be made directly to the institution in such a way that it can employ whatever technical assistance it needs and use the funds to reach agreed-upon objectives in whatever manner it deems most suitable. With sufficient safeguards, this type of arrangement could contribute a great deal to the image and self-assurance of the university, which in itself is an important aspect of development. Similarly, as the ability to manage grows, the LDC institution can be used as an intermediary to help other institutions within the country, thus reducing the need for outside help. These efforts in themselves might help to repatriate some professional talent where there is interest and potential in doing something important toward national development.

Appendix 1

Activity Code

1: Teaching
2: Research
3: Technical assistance
4: Data collection
5: Program evaluation
6: Information storage and retrieval
7: Participant in the international network of universities organized through the University of North Carolina
8: Prototype services

University Population Activities
Being Supported by Donor Agencies and/or
Their Intermediaries

Africa

Name of Institution	Location	Activity Code	Donor or Intermediary
University of Ghana	Legon, Ghana	1,2,6,7	University of North Carolina/AID
Department of Preventive Medicine, Medical School, University of Ghana	Legon, Ghana	2	University of California, Los Angeles/AID
Department of Social Statistics, Institute of Social Science and Economic Research, University of Ghana	Legon, Ghana	1,2	USAID
Regional Demographic Research Center, University of Ghana	Accra, Ghana	1,2,6	UNFPA
University of Nigeria	Nsukka, Nigeria	1,2	Population Council/AID
University of Ife	Ife, Nigeria	1,2,7	Population Council/AID, UNFPA
Medical School, Ahmadu Bello University	Zaria, Nigeria	1,2	Population Council/AID
Human Resources Research Unit, University of Lagos	Lagos, Nigeria	1,2	Population Council/AID
Institute of Child Health, University of Lagos	Lagos, Nigeria	1,2	UNFPA
University of Ibadan	Ibadan, Nigeria	1	Population Council/AID, Ford Foundation
Family Health Training Center, Makerere University College	Kampala, Uganda	1	Denmark
Faculty of Arts, University of Nairobi	Nairobi, Kenya	1	Population Council/AID
University of Dar es Salaam	Dar es Salaam, Tanzania	1,2	Population Council/AID
University of the Cameroon	Yaoundé, Cameroon	1,2,6	UNFPA
Demographic Unit, University of Liberia	Freetown, Liberia	1,2,6	UNFPA
Demographic Training and Research Center	Addis Ababa, Ethiopia	1,2,6	UNFPA
Fourah Bay College	Sierra Leone	1,2,6	UNFPA

Asia

Institute for Population and Social Research, Mahidol University	Bangkok, Thailand	1,2,5,6,7	University of North Carolina/AID, Rockefeller Foundation, UNFPA
Institute of Population Studies, Chulalongkorn University	Bangkok, Thailand	2,7	Population Council
Population Center, Pahlavi University	Shiraz, Iran	1,3,4,5,7	University of North Carolina/AID
Population Unit, Center for Economic Development and Administration, Tribhuvan University	Katmandu, Nepal	1,2	USAID

Name of Institution	Location	Activity Code	Donor or Intermediary
School of Public Health, Seoul National University	Seoul, Korea	1,2	USAID, UNFPA
College of Medicine, University of the Philippines	Manila, Philippines	1	USAID
Philippine Women's University	Manila, Philippines	1	USAID
Institute of Hygiene, University of Manila	Manila, Philippines	1,2,6	UNFPA
Medical Center, Silliman University	Dumaguete, Philippines	2	USAID
Institute for the Study of Human Reproduction, Royal and Pontifical University of Santo Tomas	Manila, Philippines	1,2	Ford Foundation
Mass Communications Institute, University of the Philippines	Quezon City, Philippines	1,2,6	UNFPA
Asian Institute of Teacher Education, University of the Philippines	Quezon City, Philippines	1,2,6	UNFPA
Population Institute, University of the Philippines	Quezon City, Philippines	1,2,6,7	Ford Foundation
Xavier University	Cagayan de Oro, Philippines	1,2,7	Population Council/AID, University of North Carolina/AID
International Institute of Population Studies	Bombay, India	1,2,6	UNFPA
Department of Economics and Sociology, University of Bombay	Bombay, India	1,2,7	Population Council
Demographic Research Center, Banaras Hindu University	Banaras, India	2	Population Council
Demographic Institute, Faculty of Economics, University of Indonesia	Jakarta, Indonesia	2	Population Council/AID, UNFPA
Demographic Institute, University of Indonesia	Jakarta, Indonesia	1	USAID
Medical Faculty, University of Indonesia	Jakarta, Indonesia	1	University of Hawaii
Medical Faculty, University of Udayana (Airlangga University)	Denpasar, Bali, Indonesia	1	University of Hawaii
School of Public Health, University of Indonesia	Jakarta, Indonesia	1	Consortium of Universities (Hawaii; University of California Berkeley and Los Angeles and Loma Linda)/AID
Demography and Social Science Division, National Institute of Public Health	Swiabaja, Indonesia	1,2	Ford Foundation, USAID
Faculty of Medicine, Cairo University	Cairo, Egypt	1,2	Ford Foundation
Faculty of Medicine, Alexandria University	Alexandria, Egypt	1,2	Ford Foundation
Demographic Training and Research Center	Cairo, Egypt	1,2,6	UNFPA
Social Science Research Center, American University, Cairo	Cairo, Egypt	2	Ford Foundation
Assiut University	Egypt	1,2	Ford Foundation
Al-Azhar University	Cairo, Egypt	1,2,7	Ford Foundation, UNFPA

Name of Institution	Location	Activity Code	Donor or Intermediary
Ain Shams University	Egypt	1,2	Ford Foundation
American University of Beirut	Beirut, Lebanon	1,2,7	Ford Foundation
Institute of Social Science, University of Lebanon	Beirut, Lebanon	1,2,6	UNFPA
Hacettepe University	Ankara, Turkey	1,2,7	Ford Foundation
Europe			
Faculty of Political Science, University of Belgrade	Belgrade, Yugoslavia	1,2,6	UNFPA
Latin America			
University del Valle	Cali, Colombia	2,4,5,7,8	Family Health Foundation/AID
Pontifical Catholic University, Javeriana	Bogotá, Colombia	1,6	University of North Carolina/AID
Regional Population Center	Bogotá, Colombia	1,2	Population Council
Institute of Advanced Studies of Administration	Caracas, Venezuela	1,2	Ford Foundation
Mexico Institute of Social Studies	Mexico City, Mexico	1,2	Ford Foundation
Haitian Center for Research in the Social Sciences	Port-au-Prince, Haiti	2	Ford Foundation
Institute of Philosophy and Human Sciences, State University of Campinas	Campinas, Brazil	1,2	Population Council
University of Northern Minas Gerais	Montes Claros, Brazil	2,4,5,8	Family Health Foundation
Center on Population and Development Studies, University of Lima	Lima, Peru	2	USAID
Pontifical Catholic University of Peru	Lima, Peru	1	Population Council/AID
Department of Social and Preventive Medicine, School of Medicine, University of the West Indies	Kingston, Jamaica	1,2	USAID
Institute of Human Reproduction, Faculty of Medicine, University of Paraguay	Asunción, Paraguay	2	USAID
Demographic Unit, Instituto Torcuato di Tella	Buenos Aires, Argentina	2	Population Council/AID
Center for Population and Social Studies, Medical School, University of Costa Rica	San José, Costa Rica	1	Ford Foundation/AID
Autonomous University of the State of Mexico	Toluca, Mexico	2,4,5,8	Family Health Foundation
Medical Schools	All member countries of Latin America	1	Pan American Federation of Medical Schools
Demographic Training and Research Center	Santiago, Chile	1,2,6	UNFPA
National Autonomous University	Santiago, Chile	1	UNFPA

Appendix 2

Possible Future University Activities

Asia

Name	Location	Agency
Population Center, Pahlavi University	Shiraz, Iran	University of North Carolina/AID
Medical School, Pahlavi University	Shiraz, Iran	Johns Hopkins/AID
University of Tehran	Tehran, Iran	Population Council/AID, Johns Hopkins/AID
Yonsei University	Seoul, Korea	Population Council/AID, Johns Hopkins/AID
Population Studies Center of Leknes	Jakarta, Indonesia	Population Council/IBRD
Al-Azhar University	Cairo, Egypt	University of North Carolina
Xavier University	Philippines	University of North Carolina/AID
To be determined	Turkey	Family Health Foundation/AID
Population Studies Center, Institute of Economics and Social Research	Jakarta, Indonesia	UNFPA
Faculty of Medicine, University of Sri Lanka	Kandy, Sri Lanka	University of Michigan/AID
Institute of Public Health, Taiwan University	Taipei, Taiwan	University of Michigan/AID

Africa

University of Zaïre	Kinshasa, Zaïre	Population Council/AID
University of Cape Coast	Cape Coast, Ghana	Population Council/AID
University of Kenya	Nairobi, Kenya	Population Council/AID, University of North Carolina/AID, IBRD
University of Abidjan	Abidjan, Ivory Coast	University of North Carolina/AID
University of Tunis	Tunis, Tunisia	University of North Carolina/AID
Institute of Population and Manpower Studies, University of Ife	Ife, Nigeria	University of North Carolina/AID
Health Training Institutions	Various countries	University of North Carolina/AID
Medical College, University of Liberia	Monrovia, Liberia	Johns Hopkins/AID

Latin America

School of Public Health, University of Caracas	Caracas, Venezuela	University of Michigan/AID

There are no other known prospects at this time, but the Population Council and the universities of Michigan, Johns Hopkins, and North Carolina have AID funds for exploration in this hemisphere.

Universities Participating in the International Network Organized by the University of North Carolina

Name and Title	Institution	Country
International Study Group		
Ihsan Dogramaci, M.D., President	Hacettepe University	Turkey
Kasarn Chartikavanij, M.D., Rector	Mahidol University	Thailand
A. A. Kwapong, Vice-Chancellor	University of Ghana	Ghana
Farhang Mehr, Chancellor	Pahlavi University	Iran
Djacir Menezes, Rector	Federal University of Rio de Janeiro	Brazil
H. A. Oluwasanmi, Vice-Chancellor	University of Ife	Nigeria
N. Ferebee Taylor, Chancellor	University of North Carolina	U.S.A.
Badawi Abd-el-Lateef Awad, Rector	Al-Azhar University	Egypt
International Task Group and Others Collaborating in Data Collection		
Ramiro Delgado, M.D., Director, Population Program	Del Valle University	Colombia
Saad Gadalla, Associate Director, Social Research Center	American University at Cairo	Egypt
Fouad Hefnawi, Chairman, Department of Obstetrics-Gynecology	Al-Azhar University	Egypt
Adenola Igun, Director, Institute of Population and Manpower Studies	University of Ife	Nigeria
Visid Parachuabmoh, Director, Institute of Population Studies	Chulalongkorn University	Thailand
M. R. M. Prasad, Convenor, Committee for the Establishment of a Population Study Center	University of Delhi	India
Moye W. Freymann, Director, Carolina Population Center	University of North Carolina	U.S.A.
Mercedes Concepción, Director, Population Institute	University of the Philippines	Philippines
Mokhzani bin Abdul Rahim, Dean, Faculty of Economics and Administration	University of Malaya	Malaysia
Muvaffak Akman, Director, Institute of Population Studies	Hacettepe University	Turkey
Mazhar Hussain, Director, Social Sciences Research Centre	University of the Punjab	Pakistan
Jahangir Khan, Assistant Professor, Department of Sociology	University of Karachi	Pakistan
Boonlert Leoprapai, Director, Institute for Population and Social Research	Mahidol University	Thailand
Francis C. Madigan, S.J., Director, Research Institute for Mindanao Culture	Xavier University	Philippines
M. H. Mofidi, Executive Director, Inter-University Council of Iran	University of Tehran	Iran
A. Ronaghy, Associate Professor, Family Medicine	Pahlavi University	Iran
Louis Verhoestraete, Director, School of Public Health	American University of Beirut	Lebanon
Jean-Claude Chasteland, Chief, Population Unit	Social Office in Beirut	Lebanon
Udai Pareek, School of Sciences and Humanities	University of Udaipur	India
Pravin M. Visaria, Demographer, Department of Economics	University of Bombay	India
K. E. de Graft-Johnson, Head, Department of Sociology	University of Ghana	Ghana
George Roberts, Institute for Social and Economic Research	University of the West Indies	Jamaica
Frank Moore, International Programs	Tulane University	U.S.A.
Paul Burgess, Director, Center for Population	University of Florida	U.S.A.

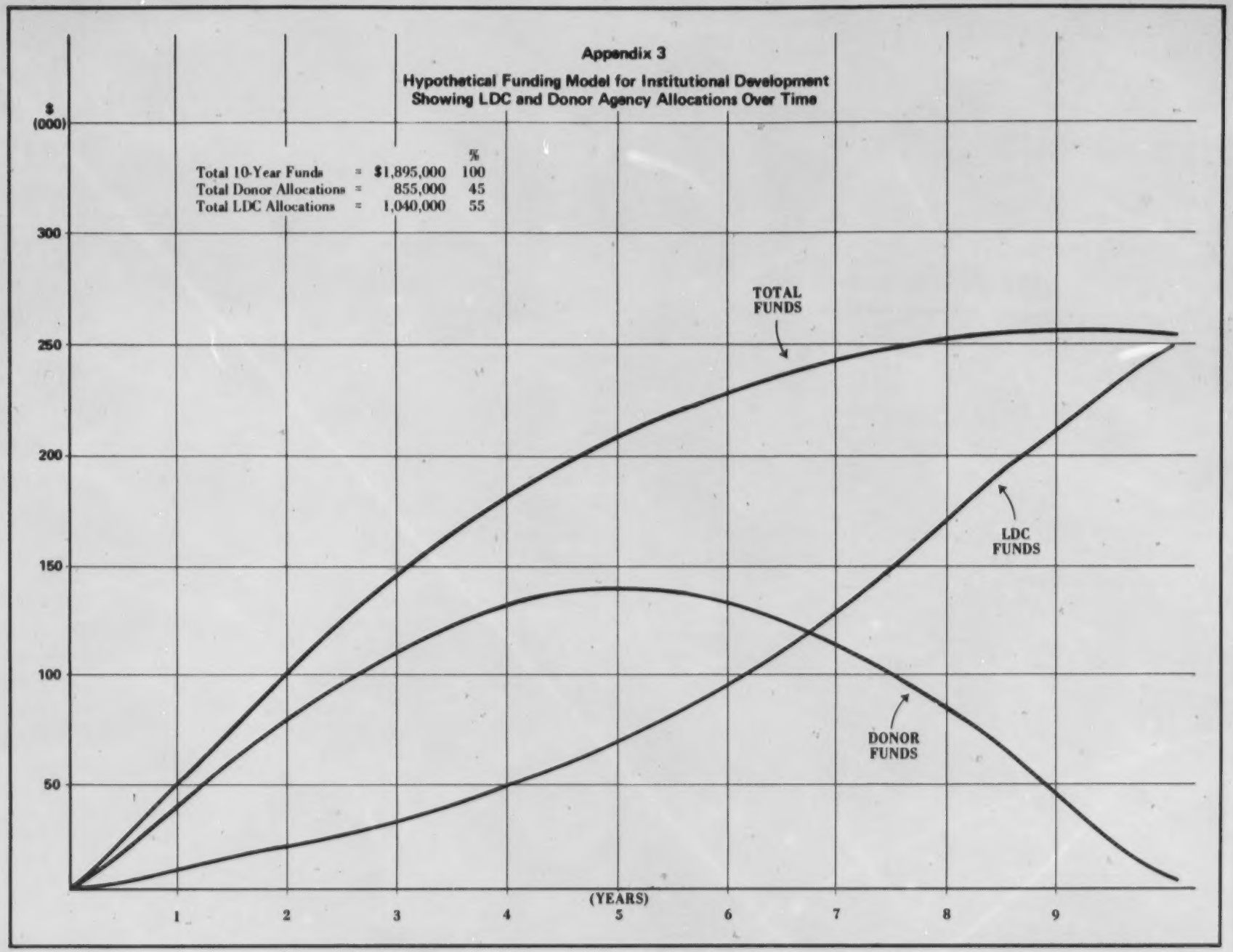
Funding Schedule Used for the Institutional Development Model

The funding schedule set forth below was used to conceptualize the graphic model showing how donor and LDC funds are related to each other. The actual amounts and time period are somewhat arbitrary and would differ from institution to institution depending upon its size and the functions that it would perform. However, the $250,000 per year at full strength seems reasonable for an institution employing seven professionals with the necessary assistants, equipment, and research support. The 10-year time frame for developing this size institution from the beginning also appears to be a reasonable target. As the graph suggests, the donor will probably be spending a small amount of funds before the project starts for planning and development work and will also have a residual input at the end of the 10-year period as an expression of continued interest and symbolic support.

There are two types of percent columns. One shows the percent of donor and LDC funds on a year-to-year basis, and the other shows the percent of the life-of-project funds that are made available each year. A good deal of institution building uses the year-by-year formulation that reasons that the donor contribution will start high, say at 90 percent, and decrease each year as LDC funds increase. An often suggested formula is as follows:

	Year									
	1	2	3	4	5	6	7	8	9	10
Percent donor funds each year	90	80	70	60	50	40	30	20	10	0
Percent LDC funds each year	10	20	30	40	50	60	70	80	90	100
Total percent	100	100	100	100	100	100	100	100	100	100

This formula tends to ignore the amount of funds involved and results in the donor contributing high percentage amounts when the costs are low and the LDC having to increase its funds at the time when the project requires heavy inputs. Thus, this type of institution building results in the donor helping to get things


Appendix 3
Hypothetical Funding Model for Institutional Development
Showing LDC and Donor Agency Allocations Over Time
$ (000)
Total 10-Year Funds = $1,895,000 100
Total Donor Allocations = 855,000 45
Total LDC Allocations = 1,040,000 55
300
250
200
150
100
50
TOTAL FUNDS
LDC FUNDS
DONOR FUNDS
1
2
3
4
5
6
7
8
9
(YEARS)

started but then fading away when larger inputs are required. Perhaps this explains why continuity and forward movement are difficult to achieve. This formula also results in the donor contributing an overall total of about 35 percent of life-of-project costs, which would be economically ideal if it would work, but it does not provide complete partnership and is an economic loss if it results in an unworkable arrangement.

A look at the percentage column based on the 10-year total suggests that this basis is a far superior method for calculating the percentage contribution by the two parties involved. This shows the donor contributions starting off slowly and building up to a sustained level for a number of years before going down. This formula results in the donor making its maximum contribution at the center of the project life and gives the LDC sufficient time to generate the necessary resources to continue the activities. This permits the sending of staff for training and their return while the donor is still the major contributor. It also permits the purchase, installation, and beginning use of equipment before the donor pulls out. On an overall basis, the donor's contribution is about 45 percent and the LDC funds represent 55 percent. Thus, a more truly joint partnership arrangement is provided while properly keeping the LDC as the major partner.

A major difficulty with calculating inputs on the life-of-project basis is the commitment implied on the part of the donor and LDC to enter into long-term agreements. Attention needs to be given to this problem in order to improve both planning and implementation of institution building projects that are by nature long-term endeavors.

Addendum
Institutions and Institution Building

In developing its assistance program in population, the Manpower and Institutions Division of the Office of Population has developed the following definitions and guidelines that it uses in referring to institutions and institution building. Institutions are basically nothing more than organized effort designed to perform one or more functions on a continuing basis. Simply defined, an institution is an organization.

There are three major classes of institutions involved in population/family planning at the country level. One class is comprised of those organizations that perform the line functions required for program operations. They are the *operational institutions*, such as ministries of health, family planning associations, and government agencies that conduct service programs. Another class is the *policy/legislative institutions*, which are comprised of those organizations that establish national policy and the laws and regulations governing family planning activities in the country. The other class is comprised of those organizations such as universities or research and training institutions that perform support functions for the line or policy/legislative organizations. These are the *supportive institutions*.

The term "institution building" refers to the process through which institutions are built, and thus it may be applied to any type of institution or organization. It is both the process and the goal of development activities in almost all fields of endeavor.

1. A list of participating universities appears at the end of appendix 1.

2. Agencies and intermediaries attending the first meeting in November, 1972, were: AID, UNFPA, IBRD, Population Council, Ford Foundation, University of North Carolina, Johns Hopkins University, University of Michigan, University of Hawaii, and Family Health Foundation.

Illustrative Funding Schedule for Institutional Development

Year	Donor Funds	% of Yearly Total	% of 10-Year Total	LDC Funds	% of Yearly Total	% of 10-Year Total	Total Funds	% of 10-Year Total
	($ 000)			($ 000)			($ 000)	
Preproject	*	*	*	*	*	*	*	*
1	40	80	5	10	20	1	50	3
2	80	80	9	20	20	2	100	5
3	110	75	13	35	25	3	145	8
4	130	70	15	50	30	5	180	9
5	135	65	16	70	35	7	205	11
6	130	57	15	95	43	9	225	12
7	110	45	13	130	55	12	240	13
8	80	32	9	170	68	16	250	13
9	40	16	5	210	84	20	250	13
10	*	*	*	250	100	25	250	13
	*	*		250			250	
N	*	*		250			250	
Total	855		100	1,040			1,895	100

* small amounts

DELIVERY SYSTEMS FOR FAMILY PLANNING

Halvor Gille

Introduction

At Bellagio II, the following schemes for promotion of family planning delivery systems in developing countries were considered on the basis of papers presented to the meeting:

1. Maternity-centered family planning programs
2. Organization and administration of family planning programs
3. Role of the private sector in the distribution of contraceptives

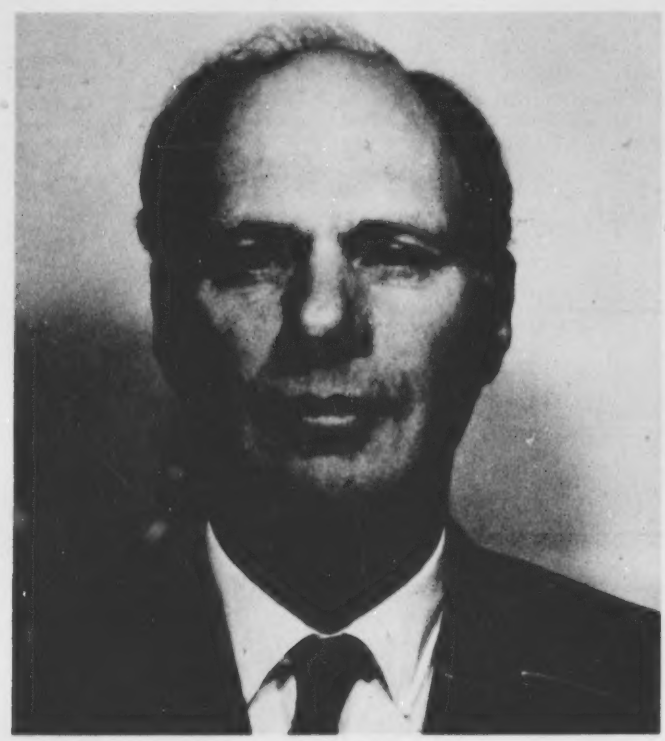
At the meeting, various issues were raised concerning the need for external assistance, collaboration, and coordination among the international organizations concerned with the implementation of the proposed action programs, the evaluation of pilot projects, and the desirability of international recommendations for the strengthening of delivery systems.

The objective of this paper is to outline the progress made since Bellagio II with regard to these schemes.[1] Furthermore, attention is called to several other schemes and approaches that, to a large extent, are new programs and innovative in nature.

Progress Made in the Development of Schemes Introduced to Bellagio II

Family Planning in Maternal and Child Health Care and in Comprehensive Health Programs

Increasing attention has been paid to the postpartum approach to family planning by which contacts with the population are established through various health programs, in particular those designed for the care of women before and after delivery. A number of family planning projects involving major hospitals and the population in the nearby areas are in various stages of development in several developing countries. Such projects are already being supported by the World Health Organization (WHO) and the United Nations Fund for Population Activities (UNFPA) in Chile, Costa Rica, Egypt, El Salvador, Haiti, Indonesia, Malaysia, Sri Lanka, and Tunisia, frequently on a demonstration basis, and in most cases at teaching and training hospitals. In due course, WHO expects to develop family health projects in around 50 countries, commencing with services in major hospitals, and expanding gradually to smaller hospitals and to other health outlets.



The International Postpartum Programme, initiated by the Population Council in 1966 and consisting of a series of hospital-based demonstration projects with built-in evaluation procedures, had reached its peak at the time of Bellagio II with over 250 collaborating hospitals in 21 different countries. Since then, this program has been in the process of winding up as an international "demonstration" program—at present, the council's support and assistance are limited to 54 hospitals in seven countries—and it is expected that the program will be phased out entirely by 1974. An external review completed early in 1973[2] confirmed that except in the case of some African countries, the need for demonstration projects as such no longer existed. It recommended that separately administered hospital-based programs be discontinued as separate entities with separate external financial support and that the postpartum concept be accepted and integrated into all aspects of national health and family planning services as a part of maternity care.

In recent years, various approaches to family planning have been developed in new demonstration projects involving the delivery of family planning services, particularly in rural or semirural areas, by the integration of family planning into maternal and child health systems or into more comprehensive health programs. Some programs of particular interest are mentioned below. The first and second concentrate on the integration of family planning within maternal and child health settings, as outlined to Bellagio II; and the third and fourth provide family planning in a larger health context.

The Maternity-Centred Family Planning Programme developed by WHO seeks to provide integrated family planning and maternal and child care services to rural populations in a number of countries. In close collaboration with national governments and with financial support from UNFPA, pilot projects are under way in Algeria, Haiti, Iran, and the Republic of Korea, and a project is starting in Thailand with emphasis on developing domiciliary family planning activities through rural health centers, midwives, nurses, and health visitors. A similar rural area project for a province in Tunisia is in the advanced planning stage, as is a joint project with the Population Council on an island in the southern Philippines.

The Population Council's Taylor/Berelson Programme (formally called MCH-Based Family Planning Demonstration Programme) has six projects in various stages of development. Emphasis is placed on the functional integration of family planning education and services at every point of contact with women, especially those receiving maternal care services and health care for their small children, as well as on trying to reach all pregnant and recently delivered women in the respective project areas (with populations varying from 200,000 to over 600,000). Each project, which is run for five years, includes a major evaluation effort both for individual projects and for international comparative purposes. Two projects are presently under way, one in Indonesia, with joint World Bank and UNFPA funding, and the other in Egypt with UNFPA funding.

In two other countries, Turkey and the Philippines (in collaboration with WHO), project proposals are under negotiation between the governments and UNFPA. Project development is also proceeding satisfactorily for areas in Brazil and Bangladesh, and initial discussions have begun with the government of an African country, south of the Sahara. An International Advisory Committee for the program met in New York at the end of March, 1973, with representatives from five of the six project countries named above, observers from Mexico (which may carry out an associated project), and several donor agencies.

The American Public Health Association, under a contract with USAID, has established a program called "Development and Evaluation of Integrated Delivery Systems," under which four large-scale pilot projects (with populations of 250,000 or more) have been designed to develop improved low-cost systems for delivery of health services. The emphasis is on rural areas, paying particular attention to maternal and child health, family planning, and nutrition services. Local operational costs are to be covered by the national government, whereas the association will provide technical assistance and inputs for planning, evaluation, commodities, and training. Projects in Panama and Ecuador, which are planned to run for seven or eight years, are in the advanced stages of preparation, and negotiations are under way in several other developing countries.

The Family Health Foundation, based at Tulane University, is developing a general model for a delivery system that involves more comprehensive health care for the population served. The first funded project is in Brazil (northern part of Minas Gerais—in an area of 2.1 million population including a city of 150,000). Other projects are under development in Colombia and Mexico.

Several other aid programs have developed related delivery systems projects. A recent project in India, with World Bank and SIDA funding, includes the maternal and child health approach to family planning in the states of Uttar Pradesh and Mysore. The government of India is developing a pilot project in Tamil Nadu State (40,000 population), using one auxiliary nurse/midwife per 5,000 population (as compared with a ratio of 1 per 10,000 population as the objective in the national program). The University of California at Santa Cruz is working on projects in Dahomey, Gambia, and Lesotho (total population coverage of 160,000), with USAID funding. The University of California at Los Angeles, with USAID funding, has a project in Danfa, north of Accra, Ghana (50,000 population), with family planning provided in various combinations with other health services. Very recently, the German churches provided $1.2 million through the Bangladesh Ecumenical Relief and Rehabilitation Services with the assistance of Johns Hopkins University, for a five-year health/family planning project in Companyganj, Bangladesh (130,000 population).

Most of the efforts described above are quite new and not yet delivering services with fully trained personnel, hence results and data on the utility of these systems for the delivery of family planning services to large-scale populations are not yet available, but a common feature is a general recognition of the fact that in the developing countries, the large majority of the populations live in rural areas and that the large majority of deliveries generally take place in medically disadvantaged settings.

Improvement in Organization and Administration of Family Planning Programs

A comprehensive five-year program of action on organization and administration of national family planning programs was proposed to Bellagio II. It was a multidisciplinary and interregional scheme to be supported by UNFPA and other organizations concerned in the United Nations system and requiring the cooperation of a number of developing countries and institutions. The proposal included the following activities:

1. Comparative country studies on the various inputs and component mixes that, in different programs under various socio-economic-demographic conditions, might lead to the best results;
2. Research grants to developing countries with the aim of promoting administrative action research required for the strengthening of family planning programs;
3. Experimental research to test new approaches to family planning by setting up pilot and demonstration projects in different settings;
4. Regional and interregional seminars and workshops on administrative and organizational aspects of national family planning programs; and,
5. Training on administrative and management techniques for family planning personnel.

Although the scheme, as conceived, has not been launched as a major global effort, several of its components have been developed and progress made toward meeting its general objectives:

Re 1: Comparative country studies have been initiated by the United Nations Economic Commission for Asia and the Far East (ECAFE) on administration of family planning programs, input/output relationships in family planning and service statistics. An International Committee on Applied Research in Population, established by the Population Council, has initiated a number of cross-national operational studies.

Re 2: A scheme of research grants to organizations and institutions for administrative action research has not been organized, but various donors have, as before, provided grants on an individual institutional basis.

Re 3: Field demonstration projects on family planning in maternal and child health and comprehensive health schemes have been developed as referred to above. In addition, studies are being carried out in several countries (India, Iran, Lebanon, Kenya, and Tunisia), supported by WHO and UNFPA, on various problems in integrating family planning into general health services. Studies and experiments on new approaches to family planning have been developed through other sectors such as social security, industry, plantations, literacy corps, and women's associations.

Re 4: An interregional seminar was convened by UNFPA in 1972 on the Management of Family Planning Delivery Systems at the Local Level, bringing together administrators of national programs from 23 countries. The Ford Foundation convened an international meeting on Family Planning and Population Program Management in 1972 (the main recommendations are attached in appendix 1). WHO convened workshops on the role of nursing/midwifery in family planning programs in a number of Asian countries and a scientific group on operational research and delivery of family planning care in health services. ECAFE organized roving seminars *inter alia* on administrative aspects of family planning programs and convened an expert group meeting on training in family planning program administration. The International Labor Office (ILO) organized an Asian Labor Management Seminar on Population and Family Planning.

Re 5: A number of courses were organized and supported by UNFPA, WHO, ECAFE, and the Carolina Population Center on the training of administrative personnel for family planning.

Private (Commercial) Sector

At Bellagio II, the relatively small involvement of the private sector in most developing countries in the production and distribu-

tion of contraceptives and in the delivery of other family planning services was noted and several proposals were made, their feasibility to be explored. Since then, a number of research and pilot projects have been undertaken in several countries supported by various donor agencies. The Population Council has prepared an inventory of these activities (reproduced in appendix 2). The following developments deserve special mention:

Research on Marketing and Distribution Problems

Two major research projects have been carried out, the first by Arthur D. Little, Inc., for the Population Council, and the second, which is still under way, by the Westinghouse Population Center, for USAID. These studies have provided detailed descriptions of how contraceptives are marketed and distributed in several developing countries and have identified the major barriers to wider distribution.

Expanded Marketing of Contraceptives

The largest scheme of marketing contraceptives established in a developing country is the condom (Nirodh) program in India. It was initiated in 1963 by the Indian Institute of Management, and, after comprehensive tests, a full-scale program was launched in 1969 with the participation of several large retail companies. The government arranged to sell the condoms to the distributing companies at heavily subsidized rates, the consumers paying mainly for the distribution itself. The use of the condom method has been growing fast—faster than any other method recently—but the number of retail outlets is still far short of the original target of at least one outlet for each Indian village.

At Bellagio II, it was proposed that a donor agency hold discussions with private firms to develop action proposals for expanding the sales of pills and condoms in the developing world. As follow-up, the Population Council made a grant to Population Services International (PSI) to prepare proposals for action. The work of PSI resulted in the development of 14 proposals from a number of commercial firms presenting their views on how they could expand sales using risk capital provided by the donor community. These firms basically wanted to expand promotional efforts, using both their own tried methods as well as innovative techniques offering pills or condoms at initially reduced prices.

Experimental Projects

The International Planned Parenthood Federation (IPPF), both at its headquarters and Western Hemisphere Regional Offices, has shown renewed interest in the commercial sector. Several initiatives have been undertaken, including marketing programs for contraceptives through retail outlets in Antigua and Sri Lanka; a feasibility study on oral contraceptives in Bangladesh, Indonesia, Malaysia, Sri Lanka, and Western Samoa; and a project in collaboration with the Westinghouse Population Center to develop a reporting system on contraceptives.

International Seminar

In November, 1971, the United Nations Industrial Development Organization (UNIDO), in collaboration with UNFPA, convened an Expert Group Meeting on the Production and Distribution of Contraceptives in Developing Countries. This meeting provided an important opportunity for bringing together representatives of interested organizations, foundations, family planning program administrators, and representatives of commercial firms to exchange views on the possibilities for expanding the role of the private sector. (The main recommendations are reproduced in appendix 3.)

International Purchasing and Marketing Development Group

Following a recommendation of the above-mentioned UNIDO/UNFPA Expert Group, a proposal was outlined suggesting the creation of a small international expert group,[3] affiliated to a multilateral agency, which would focus its attention and resources on the commercial sector. Fundamentally, the proposal assumes that there is sufficient knowledge and interest about the potential of the commercial sector as a contraceptive delivery system to warrant the creation of a full-time centralized group to promote the concept, develop and fund projects, work on a continuous basis with manufacturers, and eventually supply contraceptives to marketing programs in the developing world.

Commercial Sector Meetings

In early April, 1973, the Population Council hosted a meeting of a group of representatives of donor agencies (UNFPA, UNIDO, IBRD, USAID, Ford Foundation, and the Population Council) and selected experts in the field of commercial distribution of contraceptives to review the developments to date and to consider the next steps. More specifically, the meeting gave serious consideration to the proposals concerning the marketing of contraceptives and the proposed creation of an international purchasing and marketing group, referred to above. The meeting reached the following general conclusions:

1. While some reservations were voiced about the ethics and/or legal propriety of supporting demonstration projects by individual manufacturers of contraceptives, interest was expressed in supporting some of the project proposals developed by PSI. The Population Council will probably support at least one such project, and other donors may support additional projects.

2. Most of the participants thought that the proposal for an International Purchasing and Marketing Group was responsive to a real need for focusing attention and resources on the commercial sector at this time. It was felt that affiliation with a suitable multilateral agency would be essential for the success of such an international group.

New Schemes and Approaches

A number of new programs have been developed that were either not considered at Bellagio II or were initiated since then:

Use of Paraprofessionals and Auxiliary Personnel for Delivery of Services

The shortage of trained medical personnel has led many countries to develop programs to make more effective use of paramedical personnel and auxiliary workers. Some examples are outlined below.

The widespread acceptance of family planning in the People's Republic of China in recent years is, to a large extent, attributable to the network of health workers at the grass-roots level—the so-called "barefoot doctors." They are integrated members of the community in which they work and have primary or higher school education and six months' job training. They are responsible for preventive health care and can provide treatment of common illnesses, but the provision of family planning services is one of the major daily activities. These doctors provide advice on family planning and urge the responsibility of parenthood and the use of contraception. They distribute contraceptives, are able to perform IUD insertions, and, in the absence of other medical personnel, may perform induced abortions.[4]

After having gained experience from a pilot study in rural areas, the Ministry of Health in Thailand in 1970 decided that all

trained auxiliary midwives should be permitted to prescribe oral contraceptives. They were given a medical checklist by which to identify counterindications to pill use. The result was a notable increase in the number of pill acceptors (from 8,800 in April, 1970, to 327,353 by December, 1972). Since the effectiveness of auxiliaries in respect to both recruitment of new acceptors and the continuation rates has been very encouraging, it is believed that their use in the national program will produce highly beneficial results. A number of trained nurses are already permitted to perform IUD insertions, and the government has a proposal under consideration to train auxiliary midwives for insertions.

In Isfahan, Iran, a series of surveys was developed in 1970–1971 to determine the potential use and participation in the family planning program of various functionaries such as traditional midwives, private physicians, women's health corps, and agricultural extension agents. This was a part of a mass communications campaign that resulted in a sharp increase in acceptance rates: about one-third of all new acceptors at the clinics were referred by the functionaries.

In Sri Lanka, the Ministry of Health allowed field midwives to carry oral contraceptives on their rounds for prescription and continuing supply. The midwife is well-trained, covers an area on the average of only about 4,000 population, and is supervised by a medical officer. The ministry's policy has resulted in a large increase in pill acceptance, but there has been no apparent improvement in continuation rates in rural areas. A study of the work of midwives has revealed a wide variation in the amount of information and education given to prospective acceptors, and it seems that there has been a lack of close supervision.

In the rural program of West Malaysia, a number of traditional midwives (bidans) in six states have been trained to recruit acceptors and maintain them on the pill. The midwives give out coupons that the women take to the established clinics and at the same time are medically screened prior to pill use. The bidans get credit for coupons used and are authorized to distribute pills as resupply. As of March, 1973, most trained bidans (108 of the 124) were still participating in the program, and it is planned to expand the scheme further to cover additional rural areas.

Peer Motivators

Experiments have been carried out in some countries to enlist local personnel as active fieldworkers and motivators for family planning.

In Pakistan, in 1969, a group of full-time male/female teams was set up on a trial basis in the Sialkot district to provide family planning education and contraceptive services to all eligible married couples. These indigenous teams were chosen from residents in each village or from within a radius of about two miles of the village. The male was usually literate, the female usually not. The fieldworkers maintained records, motivated clients, supplied contraceptives, and tried to maintain contact with current and potential contraceptive users. Incentive payments were made based upon performance with regard to the number of acceptors and their continued practice of family planning. By mid-1972, the new fieldworker structure was expanded to seven other program districts, and it is planned to extend the scheme to all but the most inaccessible areas during the two-year period 1973–1975.

In Honduras, a small experiment has been set up to test the feasibility of using selected acceptors, *pacientes visitantes*, as distributors of oral contraceptives to women living in their immediate neighborhoods. Through visits, peer reassurance is provided as well as simple counseling and the exchange of coupons for continuing pill supplies. The *pacientes visitantes* have received on-the-job training from the program's social worker, and their part-time activities are supervised.

Family Planning and Nutrition

A new approach is being developed by linking family planning with nutrition programs. The provision of supplementary feeding to pregnant mothers and young children may be utilized as an incentive to establish contacts with women. At the same time, improved nutrition may have a favorable effect upon the acceptance of family planning services by reducing infant mortality and the desire for more children. Nutrition supplements are provided as a part of the national family planning program supported by UNFPA in Egypt, Indonesia, and Sri Lanka, and of the joint World Bank and SIDA population project in Uttar Pradesh and Mysore states in India.

Sterilizations

Male and female sterilizations are gaining popularity in a number of developing countries. India and China are the most important instances, but there are also signs that sterilizations may be gaining ground in some Latin American countries. At the Second International Conference on Voluntary Sterilization held in February, 1973, it was noted that about 4 million sterilizations are performed worldwide annually, and that in many countries a pattern of "contraceptive transition" is emerging by which couples switch from other methods of family planning to sterilization as a final step when their family is complete.

The most spectacular development has taken place recently in India. Massive vasectomy camps and festivals held in the Ernakulam District of the Kerala State gave remarkable results in the period of only 18 months,[5] during which time about 17 percent of all eligible couples (those with more than two children) were sterilized. The unprecedented achievements of the camps were due, to a large extent, to various significant departures from the traditional pattern of program operations, which may not necessarily be reproduced on a state- or country-wide basis, such as an aggressive promotional campaign, incentive payments several times higher than those sanctioned by the central government, direct responsibility and involvement of the administrative head for the district (the collector), and the full participation of community and local leaders.

The innovative scheme in Ernakulam was followed by an intensive vasectomy program in the state of Gujarat, where 1,000 camps were established and 222,000 vasectomies were performed in only eight weeks. The innovative vasectomy campaign has expanded to several other states, but the main emphasis has generally been merely on the establishment of camps. The results of the intensive sterilization program have contributed noticeably to improving the overall vasectomy performance in India; however, there is concern that such campaigns may preempt regular program activities and thereby exercise a damping effect in the long run. The matter of establishing additional intensive campaigns seems still to be under consideration.

Legalization of Induced Abortion

At present, well over half of the world's population lives in countries where induced abortions are legalized and facilities are available. Besides the remarkable development in the United States, where in January, 1973, the Supreme Court overruled all state laws that restricted a woman's right to obtain an abortion during her first three months of pregnancy, several other governments

have taken steps to regulate abortions during the period under review.

On April 1, 1972, the government of India put into effect the Medical Termination of Pregnancy Act, providing for legalized abortions on medical and mixed sociomedical grounds as well as for reasons of contraceptive failure. The Central Ministry of Health and Family Planning has enacted complex procedures whereby each state government can constitute a state board for the certification of registered medical practitioners and for the recommending of places where abortions can be obtained. The fact that in the central government the execution of the legislation is the responsibility of the Department of Health Services (and not the Family Planning Department) is an indication that the act is considered primarily as a health measure, and only secondarily as a factor in the National Family Planning Programme.

In January, 1963, the government of the Republic of Korea approved a maternal child health law that legalized induced abortions on criminal, eugenic, and health grounds.

The Republic of Zambia revised its abortion law in 1972, allowing for legalized induced abortions on medical and sociomedical grounds along lines similar to the present law in the United Kingdom.

An interesting development has been that the IPPF Central Medical Committee has issued a statement recommending member associations to promote innovative schemes for distribution of oral contraceptives and to educate governments and the medical profession on health benefits of nonmedical methods of distributing oral contraceptives.

Incentives

Since the last Bellagio meeting, interest and activity in incentive projects have grown. The slowing down of many national programs after an initial period of success has led many program administrators to experiment with incentives to reactivate their national programs.

In the Taiwan educational bond scheme, which offers young low-parity couples a free savings program for the education of their children as long as they limit their births, two-thirds of the eligible women enrolled originally; virtually everyone reenrolled for a second year; and contraceptive practice rose from 19 percent to 31 percent. Another project is now beginning in Taichung to enroll couples soon after their first birth and offering an escalating schedule of small inducements (free delivery and related services for the second birth or cash payments) to those who delay their second birth for stated intervals commencing with 36 months.

Incentives continue to be paid in the National Family Planning Programme in India: Rs. 30 for vasectomy, Rs. 40 for tubectomy, and Rs. 11 for IUD insertion, these being distributed at the discretion of the individual state among clients and workers (in many states the amounts have been Rs. 10, 15, and 5 respectively for the client).

In the Tamil Nadu tea estates plan in India, approximately 90 percent of the eligible women, or 500 to 600, enrolled with only two pregnancies reported in the first 10 months of operation. Other incentive schemes have been initiated by the Indian Tea Associations and by Tata Industries, but data are still too insufficient to evaluate the results.

Beyond the specific projects lies a range of questions as to the demographic effects of alternative schemes of incentives, the attitudinal changes derived from participating in them, and the ethical considerations associated with monetary and other inducements. If indeed programs are moving toward more serious interest in incentive plans, more pilot experimentation is needed to clarify these questions.

Socioeconomic Policies

Few governments with established population policies have undertaken a systematic analysis of the possibilities for bringing their legislation and socioeconomic policies into accord with demographic objectives. The government of Singapore introduced a number of legislative changes, to become effective after one year, that would reduce the maternity benefits and children's allowances, sharply increase the hospital charges for deliveries beyond the second child in each family, and also limit preferential housing schemes to families with a small number of children. In the Philippines, initial steps have been taken by decree to make legislation in various fields more consistent with official population policies. It is hoped that the series of national studies on laws, customs, and judicial practices undertaken in nearly 20 developing countries by local research institutes or universities, with financial support from UNFPA, will encourage governments to review and revise their legislation and socioeconomic policies in the light of their established population policies and objectives.

An interesting proposal has been made by the government of Egypt to try to create socioeconomic conditions that will encourage families to adopt small planning norms by establishing a pilot project on the employment of women. This project, with financial support from UNFPA, envisages the provision of employment opportunities in the clothing industry for women, the improving of their life-styles and their status generally as opposed to their established responsibilities of bearing and rearing children—thus probably leading to lower fertility. The model also includes the support of such activities as child care and nutrition, sanitation and hygiene, as well as family planning services concerned essentially with the reduction of infant and child morbidity and mortality, thereby contributing further to reducing fertility.

Applied Research

An International Committee on Applied Research in Population has been established by the Population Council to promote and conduct collaborative operational research on promising action improvements or "leads" in the population and family planning fields. As only a small number can be pursued at any one time, leads are carefully chosen, and they are selected by a set of criteria to give a balance among such features as probable impact, and the ease with which research and administration could be carried out.

The leads currently under focus are: paramedical workers (for pill resupply, pill screening, IUD insertion, and other purposes); postpartum extensions (postabortal insertions, "immediate" insertions); density of program contact points, by intensifying coverage; private doctors; intensive program of the Ernakulam and Gujarat types; abortion; incentive schemes; mass media and its programmatic utilization; legislation and decrees (as related to specific questions, such as use of paramedical workers, abortion, contraceptive import—not legislation in general); the military and its use for informational and service purposes; the commercial sector; target setting.

The paramedical and postabortal insertion leads are regarded by the committee as being most developed, and they illustrate the general line of approach. Each lead is pursued until sufficient scientific knowledge has been obtained and adequate demonstration of the effectiveness of the lead has been made, reflecting concern for implementation as well as research. Investigation proceeds in a manner that attempts to gain maximum knowledge at minimum

costs by looking first to the accumulated experience and literature, then to data already gathered that can be analyzed further, and finally to new field experiments and studies.

The committee meets several times a year and is presently composed of persons from major programs and associated research units in Colombia, the Philippines, South Korea, Taiwan, and Thailand.

Applied research has been initiated recently at the international level by other organizations. For example, the IPPF is involved in applied research in the fields of abortion and sterilization, and WHO has initiated abortion studies.

Conclusions

Since Bellagio II, substantial progress has been made in several areas in strengthening the delivery of family planning services in developing countries; however, serious shortcomings and constraints still exist and the ideal and effective solutions to the problems are not in sight in most countries.

Several innovative projects have surfaced, but these require suitable testing through trial and demonstration projects. More attention needs to be given to the possibilities for incorporating family planning activities into all types of health services, including health services other than public health, as well as other social programs reaching the population at large or major population groups. Serious consideration also should be given to making better use of existing technology, such as by taking oral contraceptives off prescription lists, legalizing induced abortions, making abortion facilities more readily available, and stimulating participation by the commercial sector in the marketing of contraceptives.

Some of the most serious constraints in present programs are the weaknesses of the government departments responsible for planning and execution, inadequate planning and administration, and lack of commitment by government leaders as well as poor communication with the population at large.

Entire governmental structure and legislation should be reviewed and possibly revised so as to support national family planning programs and policies effectively. Several governments of developing countries (often stimulated by donors) have recently set up high-level coordination machinery both at the central and provincial levels to ensure the full participation of the concerned ministries and departments.

Appendix 1
Ford Foundation Meeting On Family Planning and Population Program Management Elsinore, Denmark—June, 1972

Conclusions

The complexity of the program management task in population was underscored. This complexity stems from the fact that family planning organizations are dispersed, the tasks are complex, and there is much that is novel. Further, this is a field that is dynamic and changing rapidly. A model based on a planning-operation-evaluation cycle is probably most appropriate for analysis of population program systems which frequently change, usually in the direction of increasing complexity. Thus, chasing new sets of problems seems to be a built-in characteristic of the population field.

At this stage of population program development, effectiveness may be a more important goal than efficiency. Management improvement efforts undoubtedly will affect both effectiveness and efficiency, but the greater concern probably should be with the accomplishment of tasks. The assumption is that efficiency can be improved over time. (Noting that many national administrative systems that are geared to efficiency often appear designed to prevent action, it was emphasized that a narrower look at population program management ought to be accompanied by additional attention to the broader indigenous administrative systems.)

There is clearly a need for innovations in the field of population program management. There is a need to devise and test new ways of providing family planning services, to develop new forms of organization, and to finance these activities. At the same time, these innovations must take into account a variety of country constraints.

One of the more innovative programs discussed at the conference is the family planning program in the state of Louisiana. The object of this program is to provide family planning services increasingly within the context of maternal and child health and general health services. There is a major commitment to the use of modern management techniques throughout the program. An adaptation of the Louisiana model is being developed to generate a network of health service stations in the northern part of the state of Minas Gerais, Brazil. The Brazilian program will emphasize the use of health auxiliaries for primary health care, and will provide the additional benefit of operationally testing a general health services delivery system that will include family planning.

The requirements for program effectiveness and innovation underscore the need for entrepreneurial leadership. This suggests the greater value of entrepreneurs over polished managers at this stage of development. Such elements must be identified and trained. Convincing program governing boards of the importance of good top leadership is undoubtedly a key factor here.

Innovation and experimentation are undoubtedly easier in private and quasi-private organizations, although much of the work to be done in the population field has to be carried out by the public sector. This suggests that one should encourage private organizations to be innovative in appropriate ways. The experience of the Foundation for Population Studies (FEPAC), the private family planning organization in Mexico, in carrying out a management development program was cited as an example of an organization that has attempted systematically to raise the level of its management competence in response to extremely rapid growth of its program; the increased interest of government with which it must coordinate; and the need to orchestrate the inputs of international organizations.

It is also important to get government organizations to be more innovative. One way of doing this is to foster the development of strong private sources of analysis of family planning programs and to encourage linkages between such private organizations and public organizations. The relationship of the Administrative Staff College at Hyderabad to the Indian family planning program was identified as a case in point. Another approach is to encourage internal organizational evaluation, research, and training, as well as improved personnel systems. (Improved personnel systems were considered likely to have a greater effect on staff innovativeness than were training activities.) In addition to these internal improvement mechanisms, innovation in the public sector can perhaps be encouraged by having nongovernmental personnel involved in analysis and policy activities. The extent to which outside donors can or should attempt to affect the innovative capabilities of organizations for which they provide support should also be considered.

Another way of identifying and encouraging effective family planning programs would be to encourage a number of established management centers to engage in a comparative effort to determine how effectively different delivery systems function in various places. This idea was offered with trepidation because of the scale of the challenge and the difficulties of implementing large-scale experiments. (The two World Bank-aided experimental projects in India were identified as important examples of this type.) There was agreement that this idea should be studied further and that such an approach need not preclude efforts of more limited scale. It was also observed that while many research proposals might appear to be concerned with fine tuning and minor problems, the process of describing in detail how something functions is a way of fostering rethinking about the structure of a program.

There appears to be substantial interest in the family planning programs of several countries in receiving consulting, training, and research (especially operational research) assistance from local management institutions. This interest is reciprocated by such management organizations as the Administrative Staff College (ASC, India), the Asian Institute of Management (AIM, Philippines), Central American Institute for Management Development (INCAE, Nicaragua), and the Institute for Advanced Studies in Administration (IESA, Venezuela). AIM, for example, is developing cases in the family planning field for the Philippine program. INCAE will soon begin an analysis of the management processes of several family planning organizations in Central America to lay the base for producing teaching cases and organizing seminars for family planning managers in that region. There appear to be opportunities for further linkages of this sort, in these and in other countries. It was suggested that this process could be facilitated if one or more individuals, perhaps young M.B.A.'s, were specifically designated to play this brokering role. Attention was also called to the need for encouraging local management resources to help strengthen management training in schools of public health, where many family planning administrators who are physicians are trained.

Population or family planning programs should not become too narrowly focused in their interests. It is important that the concern for population be viewed within the broader context of family welfare programs that include health, nutrition, and other related concerns. As an example, the evolution of concerns at Gandhigram, which moved from improved water supply to inoculations and then to child spacing, was cited.

Appendix 2 Prepared by The Population Council

Tentative Inventory (by Country) of Commercial Sector Activity

Country	Type of Activity	Status	Comments
1. Afghanistan	*Research:* "Commercial Distribution of Contraceptives in Afghanistan: Actual and Potential Use of a Marketing System for Diffusion of Innovation," Russell Stone and Saxon Graham, January, 1973.	Unpublished report.	Authored by members of Afghan Demographic Studies Program of SUNY, Buffalo. AID funded. Contains recommendations for action-research projects.
2. Antigua	*Marketing Program:* Distribution of low-priced orals and condoms through general retail outlets, 1973.	Under way, initial stages.	Government will cooperate by reducing import duties and rescinding "prescription only" requirement for orals. Funded by IPPF and implemented by IPPF affiliate.
3. Bangladesh	*Feasibility Study:* "Oral Contraceptive Distribution in Five Selected Countries," John Davies, PSI, December, 1972. Proposes distribution of orals via pharmacies in Comilla.	Unpublished report. Submitted to IPPF.	Study funded by IPPF. Countries included in study: Bangladesh, Ceylon, Indonesia, Malaysia, Western Samoa.
4. Bangladesh	*Pilot Project:* Distribution in Comilla of condoms and foam tablets through general retail outlets. Village women hired as sales agents, 1966.	Completed project.	Apparently discontinued.
5. Brazil	*Research:* Study of commercial contraceptive distribution system similar to Westinghouse survey model. Administered by IPPF affiliate.	In final planning stage.	Funded by Ford Foundation.
6. Ceylon	*Marketing Program:* Distribution of orals and condoms through pharmacies. To include direct mail and mail order, February, 1973. (Based on feasibility study done by Davies in December, 1972. See item No. 3.)	Program approved and is under way.	IPPF affiliate will import all contraceptives. Government is debating waiving the "prescription only" requirement. PSI implementing.
7. Colombia	*Pilot Contraceptive Promotion Project:* Experimental effort testing the sales effects of pamphlets placed in selected pharmacies in Bogotá and Cundinamarca. Commenced 1972.	Operating project.	Funded by the Population Council and administered by the Colombian Association for the Scientific Study of Population. Additional experiments probable.

Country	Type of Activity	Status	Comments
8. Colombia	*Pilot Rural Distribution Project:* Distribution of orals, condoms, and jellies in a rural zone. Community leaders serve as sales agents. IPPF affiliate operates program. Commenced 1971.	Operating project.	IPPF affiliate may extend program. Evaluation by Population Council is under discussion.
9. Colombia	*Proposal:* "A Proposal for the Subsidized Commercial Marketing of Contraceptives in Colombia," Alfred Sollins, consultant to the Population Council, April, 1972. Rural distribution scheme involving drugstores and radio promotion.	Proposal never funded.	Population Council provided Sollins as consultant to IPPF affiliate.
10. Colombia	*Research:* "Commercial Distribution of Contraceptives in Colombia, Iran, and the Philippines," Arthur D. Little, Inc., 1971.	Published report.	Study supported by the Population Council and published as *Report* in March, 1972.
11. Colombia	*Research:* "Contraceptive Education and the Colombian Druggists," Jerald Bailey, *Studies in Family Planning*, November, 1972. Analysis of role of druggists and estimates of pharmacy sales of contraceptives.	Published report.	Carried out in collaboration with the Colombian Association of Medical Schools.
12. Costa Rica	*Coupon Program:* Clinics distribute coupons that permit low-cost purchase of orals from participating pharmacies. IPPF affiliate operates program. Commenced 1967.	Operating program.	Program is primarily designed as alternative to pill resupply through clinics. No promotion.
13. Costa Rica	*Research:* "Contraception in Costa Rica: The Role of the Private Sector, 1959–1969," Tin Myaing Thein and Jack Reynolds, February, 1972.	Published report.	Funded by AID and conducted in collaboration with IPPF affiliate.
14. Costa Rica	*Research:* "The Coupon System for Distribution of Oral Contraceptives in Costa Rica," Dick Lemkin, July, 1972.	Unpublished report.	
15. El Salvador	*Research:* Study of actual and potential contraceptive distribution through commercial channels. Carried out by IPPF affiliate.	Funded and preliminary work under way.	Funded by the Population Council.
16. Fiji	*Marketing Program:* Over-the-counter promotion of condoms and pills at government-subsidized prices. Commenced in 1969 and operated by private family planning association.	Operating program.	
17. Ghana	*Marketing Plan:* "Marketing Plan – A Background to the Commercial Distribution of Non-Prescription Contraceptives," GNFPP, August, 1971.	Completed report.	Formed basis of marketing program adopted by GNFPP.
18. Ghana	*Marketing Program:* Distribution of condoms and foam through government monopoly wholesale-retail system and independent retailers. Commenced 1971 and administered by the Ghana National Family Planning Programme.	Operating program.	Advertising was suspended soon after initiation. Current promotional efforts not known.
19. Ghana	*Program Evaluation:* "Marketing of Non-Prescription Contraceptives," GNFPP, January, 1972.	Completed report.	Analyzes first six months of the program and recommends changes.

Country	Type of Activity	Status	Comments
20. Ghana	*Research:* "Rationale for the Involvement of Private Sector Marketing Institutions in Family Planning in Africa," Timothy Black, *Studies in Family Planning*, February, 1973. Analysis of commercial distribution in Nigeria, Ghana, Uganda, and Kenya.	Published report.	
21. Guatemala	*Coupon Program:* Analogous to Costa Rica system (see item No. 12). Operated by IPPF affiliate.	Operating program.	No descriptive or evaluative reporting on the program.
22. Guatemala	*Proposal:* To study the effect of product selling in a family planning program.	PSI seeking funding.	Developed under Population Council grant to PSI.
23. India	*Marketing Program:* Distribution of Nirodh condoms through general retail outlets. Six major consumer goods companies handle distribution. Administered by a marketing manager from within the Ministry of Health. Commenced 1968.	Operating program.	A pioneering effort.
24. India	*Program Description:* "Achieving a Social Objective Through Modern Advertising and Marketing," D. R. Gupta. Delivered at 7th Asian Advertising Congress, New Delhi, November, 1970. Describes Nirodh program.	Unpublished paper.	Author is marketing director of Nirodh program.
25. India	*Proposals:* "Proposals for Family Planning Promotion: A Marketing Plan," edited by Peter S. King, Indian Institute of Management, 1964.	Unpublished report.	
26. India	*Research:* "Marketing Condoms in India: The Nirodh Program," Marcus F. Franda, *AUFS Report*, South Asia Series, vol. XVI, no. 8, August, 1972.	Published report.	First widely available general description and evaluation of the Nirodh program.
27. India	*Research:* "Marketing Research in the Nirodh Program," Anrudh Jain, 1972. Scheduled for summer, 1973, publication in *Studies in Family Planning*.	Completed manuscript.	By Anrudh Jain, Population Council adviser in India.
28. India	*Research:* "The Nirodh Marketing Organization: Report to the Ministry of Health, Family Planning and Urban Development," May 1, 1968, Arthur D. Little, Inc.	Unpublished report.	Recommendations for design and management of the Nirodh program.
29. Indonesia	*Feasibility Study:* (see item No. 3.).	Unpublished report.	Study funded by IPPF.
30. Indonesia	*Proposals:* Three proposals submitted by manufacturers for expanded and innovative marketing efforts.	Funding being sought by PSI.	Developed under Population Council grant to PSI.
31. Iran	*Proposal:* Proposal submitted to PSI for expanded oral contraceptive marketing effort.	Funding being sought by PSI.	Developed under Population Council grant to PSI.
32. Iran	*Research:* Part of three-country study by Arthur D. Little, Inc. (See item No. 10.)	Published report.	

Country	Type of Activity	Status	Comments
33. Iran	*Research:* "Summary Report Part One of the Survey of Global Patterns of Contraceptive Distribution in the Private Sector in Selected Developing Countries," Westinghouse Population Center, October, 1972.	Published report.	First part of survey under AID contract. Countries included: Venezuela, Panama, Jamaica, Iran, Turkey, South Korea, the Philippines, Thailand. (Pakistan added.)
34. Jamaica	*Proposal:* Marketing program for distribution of contraceptives through general retail outlets.	Under discussion with AID.	Prepared by Westinghouse Population Center in conjunction with nine-country survey.
35. Jamaica	*Research:* Part of nine-country Westinghouse survey. (See item No. 33.)	Published report.	
36. Japan	*Research:* "Condom Use in Japan," Y. Scott Matsumoto et al., *Studies in Family Planning*, vol. 3, no. 10, October, 1972.	Published report.	
37. Kenya	*Pilot Marketing Project:* Distribution of condoms through general retail outlets in Meru District.	Operating project.	Funded by AID. Direct mail promotion and mail order components may be added.
38. Kenya	*Proposal:* To study the effect of product selling in a family planning program.	PSI seeking funding.	Developed under Population Council grant to PSI.
39. Kenya	*Research:* Included in four-country study by Timothy Black. (See item No. 20.)	Published report.	
40. Korea	*Pilot Marketing Project:* Use by Tae Yang Company of female and male condom sales agents for door-to-door and barbershop promotion.	Operating project.	Supported by ICARP with Population Council funding.
41. Korea	*Proposal:* Proposal for expanded condom marketing effort in Korea.	PSI seeking funding.	Developed under Population Council grant to PSI.
42. Korea	*Research:* Included in Westinghouse nine-country survey. (See item No. 33.)	Published report.	First part of survey under AID contract.
43. Malaysia	*Feasibility Study:* Part of Davies/PSI Study for IPPF. (See item No. 3.)	Unpublished report.	
44. Malaysia	*Proposal:* Proposal for condom promotion.	PSI seeking funding.	Developed under Population Council grant to PSI.
45. Morocco	*Pilot Marketing Project:* Small condom test marketing project in Casablanca in 1969.	Discontinued.	
46. Nigeria	*Proposal:* Proposal for expanded oral promotion.	PSI seeking funding.	Added to original list of countries for survey.
47. Nigeria	*Research:* Part of four-country study by Timothy Black. (See item No. 20.)	Published report.	
48. Pakistan	*Research:* Part of nine-country Westinghouse survey. (See item No. 33.)	Data collection under way.	Developed under Population Council grant to PSI.
49. Panama	*Research:* Part of nine-country Westinghouse survey. (See item No. 33.)	Published report.	

Country	Type of Activity	Status	Comments
50. Philippines	*Proposals:* Proposals developed for PSI: oral contraceptive promotion to schoolteachers and oral contraceptive promotion in conjunction with infant milk-sampling program.	PSI seeking funding.	Developed under Population Council grant to PSI.
51. Philippines	*Research:* Part of nine-country Westinghouse survey. (See item No. 33.)	Published report on first phase.	Under AID contract.
52. Philippines	*Research:* Part of three-country study by Arthur D. Little, Inc. (See item No. 10.)	Published report.	
53. Sweden	*Research:* "A Brief Review of the Swedish R.F.S.U.'s Marketing Campaign and its Implications for I.P.P.F. Family Planning Associations," Dr. T. R. L. Black, Population Services, Inc., January, 1972.	Unpublished report.	
54. Thailand	*Proposal:* Proposal for oral promotion effort in NE region.	PSI seeking funding.	Developed under Population Council grant to PSI.
55. Thailand	*Research:* Part of nine-country Westinghouse survey. (See item No. 33.)	Published report.	
56. Turkey	*Pilot Marketing Project:* Distribution of condom and vaginal tablets through grocery stores in Tarsus District, 1969–1970, administered by Development Foundation of Turkey. Results of effort published in Population Council memorandum.	Unknown.	
57. Turkey	*Research:* Part of nine-country Westinghouse survey. (See item No. 33.)	Published report.	
58. Uganda	*Research:* Part of four-country study by Timothy Black. (See item No. 20.)	Published report.	
59. United States	*Mail-Order Program:* Mail-order distribution of nonprescription contraceptives by Population Planning Associates.	Operating.	
60. United States	*Research:* "The Role of the Pharmacist in Family Planning," N. N. Wagner, P. R. Millard, and Ronald J. Pion, *Journal of the American Pharmaceutical Association*, vol. NS10, no. 5, May, 1970.	Published report.	
61. Venezuela	*Research:* Part of nine-country Westinghouse survey. (See item No. 33.)	Published report.	
62. Worldwide	*Conference:* Expert Group Meeting on Contraceptive Production and Distribution, New York, November 22–24, 1971.	Unpublished proceedings and recommendations.	
63. Worldwide	*Contraceptive Reporting System:* Monitoring and classification of public and private sector activity by Westinghouse Population Center.	Operating.	Funded by IPPF.
64. Worldwide	*Proposal:* Ray Belsky proposal entitled "International Contraceptive Purchasing and Marketing Development Group."	Donor interest being sought for first phase.	

Appendix 3

UNIDO/UNFPA Expert Group Meeting on the Production and Distribution of Contraceptives in the Developing Countries New York, November, 1971

General Recommendations

Assessments

In order to prepare a suitable sector plan for the introduction of contraceptive production and distribution procedures, the following should be assessed:

1. Data on the general economic standards of the country.
2. Demographic data, population structure and increases, general attitudes of the country concerning family planning.
3. Local patterns of medical treatment and costs as a key to introduction of family planning procedures.
4. The present existence of family planning programs and their operational plans.
5. Medical care available, number of physicians, nurses, pharmacies, technicians in the medical or paramedical field, and scientific personnel in sciences related to medicine.
6. The size and nature of the existing local pharmaceutical market, the traditional supply and distribution system, price levels and pricing structures.
7. Laws regarding the importation and distribution of family planning devices, chemicals and drugs.
8. General attitudes toward outside assistance or investments and incentive and protection policies, if any.
9. The present and future potential of the industry sector to produce, package, and distribute contraceptives of specific types.
10. Laws or regulations regarding distribution, marketing, and advertising of contraceptives.

From the above assessments, an up-to-date evaluation can be made of contraceptives acceptable to a community, the general quantities that would be sold or distributed, and how these can be distributed at the least possible cost to reach the greatest number of people in rural areas.

Statistical

Theoretical effectiveness and use effectiveness. Because, for example, the insertion of IUD's requires "clinical" visits, use effectiveness can be determined more readily. The use of orals, condoms, chemicals, etc., does not always require "clinical" visits, and these problem areas cannot be adequately recorded. It is recommended that statistical studies be conducted to analyze extended use effectiveness and the influencing factors where possible.

Theoretical maximum market or maximum number of users for specific markets. Since family planning programs must take into account the theoretical maximum for specific contraceptive methods in a particular country or region, it is recommended that production and distribution plans be started from this point.

Purchase Specifications and Quality Control

The production of tablets for oral use requires extreme care and quality control because of the potency of the active ingredients. While such precautions are standard in developed countries, they are not so in many developing countries. It is recommended that developing countries critically analyze their position in this field and determine whether they can provide all the necessary safeguards needed to produce orals from basic raw materials.

While other suppliers' products (U.K., West Germany, Japan, Netherlands) do not always adhere to U.S. specifications, they do find acceptance in many countries. Certain national condom standards, for example, were developed when this product was primarily intended for use as a prophylactic against disease, and accordingly may need reevaluation for purely contraceptive use. Since it is important to have some degree of international acceptability for these products, it is recommended that steps be taken to develop an international specification, and to provide meaningful tests that can be correlated to end use. Such specifications are needed for condoms, IUD's, spermicides, and injectables.

Governmental Procedures

It was noted that the governments of the developing nations are aware of their population problem and are putting up many obstacles to the production, distribution, and advertisement of contraceptives. The private sector has been unable to reach the general public of developing countries on contraceptive methodology in spite of the fact that the governments in many cases are responsible for the communications media. It is recommended that programs be developed that will provide these countries with procedures to improve the mass distribution of contraceptives, and to create an awareness of the need for family planning through communications media.

Many countries consider mechanical and chemical contraceptives as "drugs," and therefore considerable restraint is met by producers and distributors to market their product in the same manner as nondrug items. It is recommended that laws and regulations covering these be reviewed in specific countries and steps taken to reorganize the rules and regulations.

Because the market for contraceptives is developed by the creation of consumer demand, it is recommended that contraceptives produced and delivered at acceptable costs be made a goal of the country's national program.

Since family planning is a national goal in many developing countries, such countries should consider establishing a post, perhaps called "head population officer." It is recommended that such an office be empowered to cut across administrative lines in order to assure that family planning materials can freely enter the economy and thus be effectively distributed.

Production and Distribution

Since it is well-known that the public switches easily to more modern contraceptives, it is recommended that this be taken into consideration whenever a country is planning the installation of local factories for contraceptive production.

Since the local production of contraceptives could be considered as a means of national economic or industrial development, it is recommended that the social importance be considered as the overriding activity in the developing countries.

Since a main problem is the broad distribution of contraceptives at the village level at very low cost, it is recommended that they be procured centrally where possible, and then a distribution channel "rented" through which contraceptives can travel at subsidized prices. It is further recommended that donors should consider assisting with the costs of establishing effective distribution systems for contraceptives in developing countries in addition to supplying the contraceptives themselves.

Since chemical contraceptives are generally simple formulae, they can be made locally. It is recommended that a developing country, if its market so indicates, consider the basic preparation, packaging, and testing of chemical contraceptives.

Local production of contraceptives must be considered from the point of view of foreign exchange. If more foreign exchange

would be needed to purchase plant equipment, raw materials, etc., than the outright purchase of a quantity of the finished product for a 5-to-7-year period, then the product should be imported and tariff laws modified to assure the product's extensive use. It is recommended that a country's potential to produce a series of contraceptives be adequately assessed prior to the commitment of foreign exchange and the raising of tariffs to protect home industries.

The manufacture of condoms is a capital intensive area and the minimum economic capacity is 1 million gross or more per year. Since not all countries can afford such plants, it is recommended that those developing countries or communities of countries who require condoms purchase them in bulk and test, package, and distribute them under their own brand names.

The production of contraceptives locally must be carefully considered in view of "world price" and the degree of technology, raw materials, and capital investment involved. It is recommended that local production of a contraceptive not be considered if the developments in that field indicate that technologically such production would result in products of a standard below those available from outside.

Since a major restriction on the importation of all forms of contraceptives is the limited availability of foreign exchange, and since because of this import companies prefer to use their limited funds to bring in high-profit-margin products, which do not include contraceptives, it is recommended that countries institute special conditions to permit family planning products to enter freely in order to support their national programs.

The percentage distribution of users of contraceptive supplies for the world and selected regions in 1968 shows that in more developed countries, 98 percent of the source comes from commercial sources. The government is given a very small amount of the supplies, and private organizations account for 1.5 to 2 percent of these contraceptive supplies. In developing countries, less than 40 percent is supplied by commercial sources, 55 percent by government programs, and 5 percent by private organizations. Since there is a possibility of expanding private channels both in the urban and rural areas in order to increase the trend of contraceptive use (presently at 10 percent per year), it is recommended that newer ideas and systems for new commercial marketing and distribution to increase the use of contraceptives in developing countries be considered and implemental action be developed.

Since it appears that the idea of delivering family planning only through the health system and the clinics is not correct, because many potential users can be reached through informal channels only, especially in the rural areas that account for almost half of the population of the developing countries, it is recommended that good marketing and distribution procedures be developed in order to reach more people and to lower the cost of the family planning programs by lowering the cost of contraceptives produced or purchased in bulk quantities for distribution.

Since in many countries contraceptives are purchased through a variety of ways (drugstores, marketplace vendors, wholesalers, traveling salesmen, and so on), it is recommended that the potential distribution system for contraceptives be thoroughly assessed prior to initiating a program in the country.

WHO assists developing countries by providing advisory services, quality control, information on use, purchases, distribution, etc. It is recommended that programs involving production and distribution of contraceptives consider and evaluate the WHO information prior to initiating such auxiliary programs.

Distribution of contraceptives depends upon many things, the most important one being "what the medical profession will permit" to be distributed. It is recommended that in any marketing and distribution program, the medical profession be consulted, and also the law- and regulation-making bodies, in order to assure a viable marketing and distribution program.

Since many countries have laws against advertising of contraceptives, it is recommended that steps be taken to allow some advertising in order to facilitate distribution and to create demand.

Since the condom appears to have been particularly neglected despite its many advantages, it is recommended that more general research in the improvement of the condom as a contraceptive be undertaken.

Since there has been no investigation of condom thickness as a variable in extended use effectiveness, it is recommended that this aspect be given attention.

Tariff Laws and Regulations

Tariff laws of many developing countries are inconsistent as regards manufacturing. For example, a tariff on raw materials may be as high as 50 percent, while the tariff on the finished contraceptive may be only 10 percent, providing little incentive for domestic production of some contraceptives. Further, raw materials can be permitted entry, although a high tariff is exacted; however, a finished product may require numerous permits, delays in transfer, etc., thereby reducing the delivery effectiveness of the items to areas most in need. It is recommended that such tariff laws be reviewed for contraceptive items and suggestions made to modify them in order to carry out an effective contraceptive distribution program in a particular country.

There is a large traffic in illegal transport of contraceptives into developing countries because of the restrictions placed upon legal importation, such as control of currency, complex and very difficult import procedures or high duties, and the fact that smuggling is nourished by the belief that the higher-priced smuggled product is superior in quality and safety to locally manufactured condoms. It is therefore recommended that the existing laws and regulations of developing countries be reviewed with the objective of suggesting changes to governments in order to make the distribution of contraceptives more effective.

International Contraceptive Marketing and Development Entity

Since motivation and the changing of values in the field of contraceptives have not been effectively approached by the private sector, the governments, or by private organizations, it is recommended that an International Contraceptive Marketing and Development Entity responsible for establishing international prices, distribution, and marketing systems and motivation procedures be considered.

Since it is totally uneconomic for a private firm to attempt to build mass markets for contraceptives in the poorer developing countries, because of the combination of very low consumer prices and very high costs for product and market development needed to achieve deep market penetration, it is recommended that consideration be given to subsidizing initially a market and distribution strategy.

Commercial Sector Participation

Since government and voluntary organizational programs, which are primarily designed to serve the poor, would need to be expanded enormously at a heavy cost to society to activate consumer demand, it is recommended that the potential force of the vast promotional, distributional, and managerial resources available to the commercial sector be directed toward family planning programs.

Since national family planning programs in developing countries have a long way to go to achieve their goals, and it appears that assistance from the commercial sector is needed, it is recommended that the commercial sector begin making a more significant contribution to the solution of the total problem in such areas as advertising, retailing, consumer research, information feedback, data processing, etc.

Since the health-center-based family planning approach to fertility control is unlikely to reduce the existing malignant rate of population growth in the developing countries, the medical resources available are too limited, and the medical methods of contraception do not have the demographic impact originally promised, it is recommended that in order to have an effective reduction in fertility, a multidisciplinary program, i.e., a college of inputs from all sectors of the society, utilizing all methods of birth control, be considered.

Since in any society there are always a number of institutions that do have a potential to augment existing family planning methods, such as trade unions, women's organizations, churches, and commercial concerns, and since in many cases their potential has been ignored, it is recommended that studies be undertaken to define their potential roles more adequately, and to explore ways in which they might be assisted via funding in order to open up their potential in the role of family planning, involving contraceptive production, packaging, distribution, and so forth.

Since commercial contraceptive sales depend upon a market for the products, and since markets are developed by consumer demand, and therefore sectors could develop marketing and distribution systems based on this demand, the distribution of foreign subsidized products (i.e., family planning programs, etc.), while needed, tends to disrupt the normal merchandising. Since this condition would tend to confine distribution through family planning systems, rather than to the more detailed marketing of commercial sectors, it is recommended that wherever possible the distribution of contraceptives be handled via the commercial sector to assure maximum distribution.

Since the accumulated evidence of the last decade indicates that the traditional medical approach to voluntary family planning as a means of lowering population growth is adequate, it is recommended that in order to persuade the fertile to practice birth control in sufficient numbers to have any demographic effect, family planning must be considered as a marketing operation. This means not only meeting the demand according to the traditions of medicine, but actually generating the demand according to the traditions of commerce.

Since it is recognized that any harnessing of the private sector for fertility control will only be possible on purely commercial terms, and that since capital may not be available from the contraceptive industry or private resources, and since such capital would not likely be made available by local governments without the imposition of repressive conditions and a degree of overriding bureaucratic control that would almost certainly stifle initiative, it is recommended that international foreign assistance funds be used to provide capital to marshal private sector resources for the promotion and delivery of family planning in the developing countries.

Role of Family Planners

Since the need exists for generating a more rapid increase for contraceptive demand, it is recommended that managers of family planning programs be encouraged and assisted to:

1. Systematically study populations as consumers, not patients;
2. Develop ways to increase consumer response; and
3. Determine what would be the best feasible combination of changes in demand determinates that would generate the largest gain in demand.

Selection of Contraceptives

IUD's are developing consumer resistance in some countries due to bleeding and expulsions; however, in other countries they are well-received. New development in the construction of IUD's, for example the copper-T, developed by Dr. Tatum of the Population Council, has indicated a better "stay" record than other types. It is recommended that where IUD's are finding consumer resistance, the copper-T be evaluated before changes in contraceptive usage are recommended. It is recommended that a selection of a particular contraceptive should be made on the basis that it serves its purpose and reaches the objectives of family planning, bearing in mind the feasibility in practice.

Licensing

Since the licensing of contraceptives deserves additional effort insofar as it affects developing countries, it is recommended that a more comprehensive study of this subject be undertaken, in keeping with the specific needs of developing countries.

Consumer Demand

Experience has shown that under conditions of high illiteracy and low disposable incomes, local marketing programs are generally most effective when they are direct, forceful, and continuous. Once a person recognizes a brand name or color of packaging, he uses this as a generic reference for the commodity. It is recommended that these factors be considered in planning consumer-demand programs.

Since consumer demand depends upon the impact of communications media, and since, because of various illiteracy levels in different parts of the world, the best means of communication will vary—people may be oriented to sound or printed matter—it is recommended that the distribution of contraceptives take these specific conditions into consideration.

Abortion Equipment

A variety of abortion procedures are now available, many without the dilatation requirement. Since many countries now have legal abortion laws, low-cost, safe procedures are needed that can be operated perhaps by paramedical personnel in areas where medically trained personnel are not available. It is recommended that low-cost, easily operable abortion equipment be developed and tested and specifications be prepared for its production and acceptability; and that research studies on the feasibility of paramedical personnel carrying out abortions be investigated.

Future Meetings

Since: (1) family planning personnel find it useful to be able to discuss periodically with producers and distributors the role of the commercial sector in fostering contraceptive usage, to give the latter a better idea of the amount of material needed to assess the practicability and desirability of local production, and to establish in a coordinated way the logistical support necessary for the programs, including the communications media; there (2) appears to exist a lack of communication between the producers and the distributors of contraceptives on one side and personnel in charge of the family delivery system on the other; (3) the commercial sector does not always understand the rationale of family planning, and family planners are not taking into account the importance of working together with the private sector; (4) it is recommended

that meetings or workshops covering these aspects should be held yearly.

Since planning is now in progress for the forthcoming World Population Conference in 1974, it is recommended that UNIDO prepare a paper on the production, marketing, and distribution of contraceptives in developing countries.

1. Contributions made to this paper by Dr. Bernard Berelson, The Population Council, are acknowledged with appreciation.

2. The Population Council, *External Review Team for International Postpartum Programme* (Report by B. N. Branch, R. F. Frankowski, and A. D. Langmuir), February, 1973.

3. By R. Belsky, formerly with The Population Council.

4. A. Faundes and T. Luukkainen, "Health and Family Planning Services in the Chinese People's Republic," *Studies in Family Planning*, The Population Council, July, 1972.

5. Government of India, *The Story of the Ernakulam Experiment in Family Planning*, Kerala, 1972.

CONTRACEPTIVE DEVELOPMENT

Allan C. Barnes, M.D., Bruce Schearer, and Sheldon Segal

Four major programs to develop new methods of fertility control for public sector use are currently under way: the population research program of USAID, the contraceptive development program of the Center for Population Research of USNICHD, the WHO Expanded Programme of Research, Development and Training in Human Reproduction, and the Population Council's International Committee for Contraception Research (ICCR). These four programs constitute the primary loci of research and development of new contraceptive methods outside of the pharmaceutical industry. (A resumé of the status of the contraceptive "leads" now under development by these programs appears in Appendix I.) The USAID population research program is divided into four areas: descriptive demography, analysis of population dynamics, family planning program operations research, and development of improved means of fertility control. The latter program in fertility regulation was launched in 1968; by 1972, a total of nearly $30 million had been expended in support of research and development in the following areas:

	Millions of Dollars	
	Expenditures through 1971	1972 Expenditures
Menses induction using luteolytic agents	$4.77	–
Menses induction using prostaglandins	4.54	1.7
Releasing factor analogs as contraceptives	2.25	–
New intrauterine devices	0.64	–
Improved methods of male and female sterilization	1.04	0.2
Spermicides protecting against venereal disease	0.58	–
Field testing of conventional intrauterine devices	1.48	–
Field testing of new fertility control methods	3.11	1.9
Side effects of conventional oral contraceptives and other studies	1.03	–
Small grants program	–	3.4
Simplification of current methods for use in LDC's (includes training component)	–	2.7
Totals	$19.50	$9.9

Clinical testing of new methods has centered primarily in the area of prostaglandins. Clinical trials of new clip for tubal occlusion are just beginning.

The USNICHD Center for Population Research carries out activities in four areas: biological research, including contraceptive development, fundamental research, and evaluation of current contraceptives; behavioral sciences research; institutional development, including manpower development and designation and support of population research centers; and dissemination of scientific information for the population field. The overall budget for 1972 amounted to $40 million, of which $28.2 million was earmarked for the biological research area. In the contraceptive development program, which was initiated in 1969, eleven major areas have been selected for applied research and development. These areas and the approximate levels of expenditures devoted to each in 1972 are as follows:

	Millions of Dollars
Synthesis and testing of new contraceptive drugs (including prostaglandin analogs, new steroids, and releasing factors and their analogs)	$1.13
Contraceptive drug screening program	1.57
Postcoital estrogen contraceptive	.40
Reversible male sterilization	0.39
Chemical male contraceptive	0.06
Improved methods of female sterilization	0.64
Medicated and other new intrauterine devices	0.14
Improved long-acting, slow-release contraceptives	0.09
Directed research on the passage of ova through the oviduct and on the timing of ovulation	1.24
Directed research on prostaglandins	0.49
Direct research on the male reproductive system, sperm, and the fertilization process	4.26
Total	$10.41

It is anticipated that the first testing in humans under the NICHD contraceptive development program will occur for some of the new devices and new drug delivery fertility control "leads" during 1973. The budget projected for the overall program for 1973 totals $44.7 million.

The WHO Expanded Programme, begun in 1971, encompasses contraceptive development activities; basic research, directed re-

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search, and training in reproductive biology; institutional development in the biomedical sciences related to the population field; a small supplies program; a seminar and workshop program; and a publications program. To carry out these activities, the Expanded Programme relies heavily on a grant and contract approach similar to that of the AID and NICHD programs. Expenditures for these activities through 1972 totaled $4.5 million, of which $1.23 million was devoted to studies of prospective new fertility control methods at or near the clinical stages of testing. Through its task forces for collaborative research and development in fertility regulation, the Expanded Programme has thus far focused on seven project areas:

Methods for the regulation of implantation	($19,700)
Medicated intrauterine devices	19,700
Methods for the regulation of ovum transport	($185,800)
Chemical methods for occluding the Fallopian tubes	96,500
Surgical methods for occluding the Fallopian tubes	25,000
Postcoital contraceptive method	10,500
Research on the effect of drugs on ovum transport and survival	53,800
Methods for regulation in the male of the fertilizing ability of sperm	($108,200)
Clinical trials and research on male antifertility drugs	56,700
Research on epididymal function as it affects sperm maturation	51,500
Methods for the regulation of sperm migration and survival in the female	($227,000)
Medicated vaginal rings	52,000
Intracervical contraceptive devices	69,300
Effects of chemical agents and drugs on cervical mucus	35,800
Effects of physiological factors and current contraceptives on sperm migration and survival in the uterus	39,000
Prostaglandins in fertility regulation	($375,000)
Clinical trials of prostaglandins and their analogs	166,000
Human metabolism of prostaglandins and their analogs	163,000
Coordination and data processing	46,000
Sequelae and complications of induced abortion	($125,000)
Immediate and short-term sequelae	91,600
Long-term complications	33,400
Acceptability of fertility regulation methods	($150,000)
Total	$1,229,200

An additional six task force areas have been selected for research and development and will be funded as resources become available: agents stimulating gonadal function; mechanism of hormone action and antihormones; pharmacological models pertinent to contraceptive development; sequelae of vasal occlusion; ovulation detection; and collection of biological data relevant to fertility control. Initial clinical testing related to some of the first six project areas began in late 1972. A total budget of $6.1 million is projected for 1973; of this $2.8 million will be allocated to task force projects.

The International Committee for Contraception Research of the Population Council was initiated in mid-1971. By the end of 1972, the program had expended approximately $1.7 million, of which $1.2 million was devoted to the development of 11 fertility control leads and to several probing studies of potential leads:

Male subdermal contraceptive implant	$ 129,000
Female subdermal contraceptive implant	260,000
Injectable contraceptive	62,000
Vaginal ring contraceptive device	29,000
Copper-T intrauterine device	514,000
Weekly pill	37,000
Reversible male sterilization	32,000
Improved methods of female sterilization	31,000
Menses induction	139,000
Precoital pill	12,000
Postcoital pill	21,000
Probing studies	47,000
Total	$1,313,000

During this period, the ICCR tested 45 different drugs and six different devices. Excluding the 42,000 copper-T cases, over 3,200 subjects have participated in these trials, for a combined total of about 19,000 months of clinical testing. To permit such clinical studies in the U.S. as well as abroad, nine Investigational New Drug applications and one New Drug application have been filed with the United States's FDA. The most advanced lead, the copper-T, has cleared the final stages of testing and development and arrangements are now being made for its release to both the public and private sectors. The committee regards three more of its leads as being at the advanced stages of clinical testing: the female subdermal implant, the weekly pill, and the vaginal ring contraceptive device. Testing of four more leads is still at the early stages, and development of the three remaining leads—menses induction, the precoital pill, and the postcoital pill—has been either curtailed or abandoned because of the unfavorable results of early clinical trials. A variety of other potential fertility control leads are being investigated in probing studies, and those that show adequate promise will be taken on as major ICCR projects. A budget in the range of $1.3 million is anticipated for 1973.

At least three of these programs (AID, WHO, and ICCR) are actively considering how the methods under development can best be adapted to meet the needs of prospective users in developing country settings. While maintaining their roles and objectives as public sector agencies and within the limitations imposed by their respective patent policies, each program seeks to establish working agreements with pharmaceutical companies in order to gain access to proprietary drugs for testing and development.

It appears highly likely that at least a half-dozen new methods of fertility control will emerge from these programs over the course of the next five years. It is safe to predict that none will be altogether free of drawbacks, but they are virtually certain to have some demographic impact for several reasons.

In varying fashion, each of the prospective new methods will be more "convenient" than currently available contraceptive methods, and to some extent they will therefore increase acceptance by reducing the high thresholds of motivation that are now required to limit family size. For the most part, the improved "convenience" of the new methods will take the form of improved modes of administration (weekly or monthly pills, precoital or postcoital pills, under-the-skin implants, long-term injectable contraceptives, vaginal ring contraceptive, out-patient methods of female sterilization) and/or a reduction in side effects such as nausea, bleeding, and pain. Some, such as contraception or reversible sterilization for the male, may provide fundamental new improvements over the existing technology.

In addition, the prospective new methods will offer a new range and variety of contraceptive options to users, and they may thus allow some of the cultural barriers to the practice of contraception to be circumvented. Also, their newness will initially stimulate interest and acceptance beyond the levels afforded to current methods.

Possibly the greatest demographic impact of this next generation of contraceptive methods will arise from the degree to which they improve upon the duration of use associated with current methods. Because of their high effectiveness and increased convenience and acceptability and, in some cases, long-term action, it is anticipated that the new methods will exhibit higher continuation rates. Since the continuation rates and, consequently, number of births averted with current methods are low, the new methods need not be ideal in order to have a significant impact. High (but not perfect) continuation rates coupled with high effectiveness

could increase the average number of births averted for each acceptor of the new methods by two- or four-fold over that achieved with conventional methods.

Beyond the impact of their increased acceptability, such an effect on births averted would result in an automatic two- to four-fold increase in productivity of family planning personnel. If such an effect can be achieved with the new methods now under development, the costs associated with these programs will have paid large dividends.

Indeed, it may be feasible to quantify these dividends by applying cost-benefit analysis techniques in several possible ways. In certain national settings, it may be possible to assign reasonably meaningful numbers to productivity (as defined above) both before and after the programmatic introduction of a highly improved fertility control method, yielding an estimate of the actual savings provided by the "new" method. Alternatively, crude estimates of the costs of unwanted pregnancies and abortions can be obtained for some settings, and estimates of the fraction of such events that can be ascribed to contraceptive failure can be used to calculate the potential savings that would have theoretically resulted from improved contraceptive technology. These types of analyses can be grounded to varying degrees of rigor. At their best, they could be of considerable value in guiding the level and timing of expenditures anticipated for various specific contraceptive leads.

But in spite of the expectations generated by current contraceptive development efforts, the next generation of fertility control methods will not be ideal—completely effective, yet reversible; free of all side effects; unconnected with the sexual act; acceptable across different cultures. Such ideal methods have long been viewed as the shadows in Plato's cave. Now, however, based on the explosion of knowledge in reproductive biology over the past few years, near-to-ideal methods are closer to reality. While the broad concepts that have emerged from these breakthroughs in fundamental research point the way to a third generation of highly improved contraceptive methods, some years of additional research will be required to fill in the precise biochemical and physiological details of these concepts before the necessary specificity of information will be on hand to permit development of these third generation methods.

Research in the Biomedical Sciences

Basic research in biology is currently undergoing the same kind of germinal explosion of knowledge as the field of physics experienced early in this century. Over the course of the past several years, the consequences of fundamental new discoveries in biochemistry and genetics made during the early 1960's have begun to reverberate through the field of reproductive biology and its allied disciplines. Within a 10-year period, research in these areas has identified the role of two major chemical mediators of hormone action (one an almost unknown substance, prostaglandin), unraveled the chemical details of the manner in which the brain controls reproductive function via the pituitary gland, isolated and chemically characterized receptor molecules for hormones, visually and chemically scanned in breathtaking detail the surfaces of cells and membranes, and come close to fully elucidating the workings of the immune system. Hormone levels in the blood can be rapidly detected and measured with assays a thousand times more sensitive and accurate than previous ones; the exact chemical structures of these hormones are now known, and the role of the genetic machinery in the chemical and physiological action of hormones is well on its way to being deciphered. Yet, from a variety of vantage points, it seems clear that this fruitful phase of discovery and transformation represents only the start of a period of great productivity.

The costs of this outpouring of knowledge from basic research have been relatively small. Total federal support for basic research related to reproduction in the U.S. in 1971 was approximately $12 million. An additional $10.9 million was committed to applied contraceptive research and development, and approximately $4.5 million was devoted to evaluations of currently available fertility regulation techniques. A total of $1.6 million was expended to support research in the related areas of animal reproductive behavior and population ecology. Support for basic research components of contraceptive development and applied research from the three major private contributors, the Ford Foundation, the Rockefeller Foundation, and the Population Council, amounted to about $15.8 million during 1972.

Examples of the kinds of new methods that now appear feasible on the basis of this recent research include: a completely effective once-a-month pill free of side effects; a simple, self-administered test for predicting ovulation one to two days before it occurs; highly effective male and female subdermal implants effective for five to ten years without side effects; safe, simple chemical methods for determining the sex of offspring. The key to all of these potential methods will be their extremely high specificity of action. Biological effectiveness will be attained, not at the physiological level, but on the molecular level using molecules that are completely specific to the reproductive process.

It is important that the necessary follow-through take place to achieve these expectations. This will entail support for the increasing levels of expenditures in all aspects of research in reproductive biology and medicine during the next five-year period. Basic research costs will increase not only because of the accelerating pace of new discovery in the field but also in response to the essential need to accumulate the detailed knowledge about these discoveries that will permit contraceptive development. Applied research costs will accelerate as more new methods are identified and as they enter the final and more costly stages of clinical testing.

Appendix 1

Fertility Control Leads Currently Under Investigation by the Four Major Contraceptive Development Programs January, 1973

Lead	Programs Involved
Female contraceptive implants	ICCR* (NICHD) (WHO)
Vaginal ring contraceptive	ICCR* WHO (NICHD)
Injectable contraceptive	ICCR*
Weekly pill	ICCR*
Postcoital contraceptive	NICHD* WHO (ICCR*-discontinued)
Contraceptives acting on cervical mucus (precoital pill)	WHO (ICCR*-discontinued)
Intracervical contraceptive devices	WHO
Male progestin/androgen contraceptive	ICCR* NICHD
Other male chemical contraceptives	NICHD WHO
New spermicides	AID WHO
Menses inducing agents (excluding prostaglandins)	ICCR* AID
Prostaglandins	AID* WHO (ICCR)*
Releasing factors	AID NICHD (ICCR)*
Synthesis and screening of other new chemical agents	NICHD (AID) (ICCR)*
Copper IUD's	ICCR* (WHO) (NICHD)
Medicated IUD's	WHO* NICHD
Noncopper, nonmedicated new IUD's	AID* NICHD (ICCR)*
Reversible male sterilization	ICCR* AID NICHD
Improved female sterilization	AID* ICCR* NICHD
Methods for detecting and timing ovulation (controlled rhythm)	NICHD WHO
Development of new drug release formulations	ICCR NICHD

* undergoing clinical testing
( ) minor involvement

DEMOGRAPHIC DATA COLLECTION AND ANALYSIS

Halvor Gille

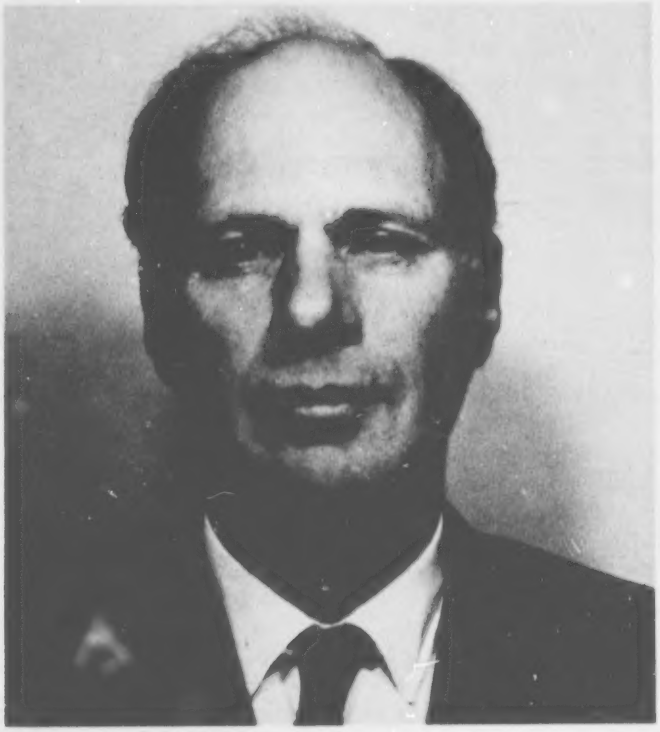
Introduction

In a paper on demographic data collection and analysis submitted to Bellagio II, attention was drawn to the serious shortage and limited reliability of the data that existed in developing countries. It was pointed out that even approximate information on basic demographic data such as total population, sex and age composition, and geographical distribution was not available for as many as 30 countries.

The situation with regard to the availability of information on vital statistics was even more serious. The aggregate population that had recorded current statistics on births and deaths represented only about 40 percent of the world's population. Even so, these were considered as reasonably accurate to an estimated degree of not less than 90 percent for only about a third of the world's population, found mostly in industrialized areas. The accuracy of even the limited data available for the developing countries was grossly deficient. It was recognized that in these circumstances, developing countries were generally handicapped severely in their development planning by lack of information on the rate of increase of their population and the consequences.

In view of the situation that prevailed, certain action programs were proposed, designed to overcome the shortage of demographic data and to make the governments of various countries aware of their population problems. The objectives of the selected programs were:

1. To encourage countries that had never taken full enumeration of their population to carry out at least a limited census as soon as possible;



2. To help countries that may have previously conducted censuses but faced difficulties at specific stages in conducting a new census or in completing one that had been undertaken recently; and

3. To assist countries in conducting sample surveys, in particular where vital statistics and migration data were lacking or deficient.

The cost for the total programs envisaged and the financial resources required from external sources to execute the programs successfully were estimated tentatively.

This discussion is concerned with the progress made, as well as the current status and estimated future needs with regard to the collection and analysis of basic demographic data in developing countries. Main attention is given to the role played by the United Nations Fund for Population Activities (UNFPA)—the details are presented in the appendix—but reference is also given to relevant contributions made by non-United Nations agencies and institutions.

Assistance to Programs on Demographic Data Collection and Analysis

Interregional and Regional Activities

The United Nations has continued its efforts to promote the development of demographic statistics on a global level. The goal set in the World Population Census Programme that each country should take at least one census during the decade is nearer its fulfillment than ever before. It is anticipated that the censuses taken or planned during the 1970 round of censuses—the decade ending in 1974—will cover some 2.7 billion people, or about 75 percent of the world's population (without China, the coverage will be over 96 percent). This is a considerable improvement over the enumeration during the 1960 round of censuses, which covered some 68 percent of the world's population. The fact remains, however, that a number of countries, particularly in Africa, south of the Sahara, still have not yet taken their first population census.

In support of its demographic statistics program, the United Nations has continued the preparation of guidelines and recommendations. As a part of the *Handbook of Population and Housing Census Methods*,[1] volumes have been issued on "Topics and Tabulations for Housing Censuses" (part III); "Survey of Population and Housing Census Experience, 1955–1964" (part IV, section I); and "Sampling in Connexion with Population and Housing Censuses" (part VI). "The Principles and Recommendations for a Vital Statistics System" has been completed. Draft recommendations for the improvement of international migration statistics and internal migration were considered by the Statistical Commission at its most recent session, held in November, 1972.

Furthermore, progress was made toward the development of a system of demographic and social statistics. Proposals concerning the concepts, scope, basic series, classifications, and indicators in such a system[2] were discussed at regional meetings held in Africa, Asia, Europe, and Latin America. Work has been initiated at the specific request of the Statistical Commission on the character, concepts, and content of a system appropriate to the circumstances and problems of the developing countries.

One of the most important forms of assistance to demographic data collection and analysis is the training of personnel. Over one-third (37 percent) of UNFPA assistance to demography and population statistics is provided in the form of fellowships, courses, seminars, and other types of support for training such as development and maintenance of regional and subregional training facili-

ties. Support to regional demographic training and research centers has recently increased substantially by the creation of two centers in Africa (at Yaoundé for French-speaking countries and at Accra for English-speaking countries south of the Sahara) in addition to the well-established centers in Asia and the Far East (Bombay), Latin America (Santiago), and the Middle East and North Africa (Cairo). Assistance is also provided by the United Nations to seven subregional statistical training centers for middle-level statisticians in Africa. A new approach to training has been developed by the United States Bureau of the Census, which has organized with the United States Agency for International Development (USAID) a correspondence course on basic professional instruction in demography and census-taking for participants in about 30 developing countries.

Direct Assistance to Developing Countries

Direct assistance to developing countries in the field of demographic data collection and analysis has become a factor of increasing importance. Many developing countries, in particular those in Africa, are not able with their own resources to implement urgently needed census and vital statistics programs. Up to the end of 1972, the UNFPA had provided support in this field to the extent of over $5 million.[3] There has been a steady increase over the years in the amounts allocated for this purpose. The increasing demand for assistance for data collection and analysis is a reflection of the growing interest of many countries in participating in the 1970 worldwide round of population censuses, and the increasing awareness of governments, particularly in the least developed countries, that international assistance is available on a substantial scale.

The assistance given in various parts of the world reflects, to a large extent, the different needs for collection of basic demographic data. Continental Africa, which has a more serious lag of basic data than anywhere else, received the most assistance ($2 million), while Asia and the Far East, where countries generally are more advanced in periodic census-taking, requested and received only $680,000. Latin America was the second largest recipient region ($1.3 million). The Middle East and Near East, though relatively small in terms of population size and geographical area, claimed a sizable proportion of assistance ($925,000).

In Africa, where 18 countries have never undertaken a population census, and where a number of other countries have not been able to take a population census in recent years, an African census program has been formulated that includes a complete enumeration of the population by sex and area subdivisions and supplementary sample surveys on such basic items as births, deaths, marriages, and migration. Some 21 governments have indicated their interest in obtaining financial support from UNFPA for various components required, including advisory services, training of local personnel, equipment, salaries of enumerators, preparation of manuals, and printing of schedules and census publications. The largest program approved so far is for Ethiopia, where about $2 million is needed to enable the government to carry out a census in 1974 in a country where many parts are not easily accessible and where there is no prior census experience.

In other regions, several countries also lack the necessary experience and resources for census-taking, and they receive assistance or have indicated their needs. Thus, in Asia, a large program is under preparation in Burma, where the government, in spite of its general lack of interest in receiving foreign aid, has requested substantial support from UNFPA to carry out its first complete population census since independence.

Establishment of a vital statistics system is considered, in many countries, to be an even more difficult undertaking than periodic census-taking. A number of countries have requested assistance to prepare plans or to build up registration of vital events in sample areas or on a countrywide basis. The assistance in this field has so far been rather modest in financial terms, but it is expected that very substantial amounts will be required in due course to meet the needs of building up a reasonably complete vital statistics system, which in many countries could take a generation or more to establish.

Experimental Schemes

An international program of Laboratories for Population Statistics has been developed through cooperative arrangements between the University of North Carolina and scientific institutions in selected developing countries with financial assistance from USAID. The program aims at improving methods for the measurement of population change and developing innovative utilization and analysis of demographic data. The term "laboratory" has been adopted to denote the limited and research-oriented nature of the projects as distinct from the regular ongoing collection of national demographic statistics. The objectives of the program are accomplished by support to the national institutions concerned; exchange of scientific information, operating experiences, and preliminary findings among the institutions involved; the preparation of procedural manuals, and the convening of annual conferences. Laboratories are now operating in Morocco, the Philippines, and Colombia, and several others are in the process of being set up or are under negotiation.

Although the Population Council does not enter into large-scale funding of basic data collection, such as population censuses or vital statistics, it supports experimental efforts to provide better methodology in this field. The council has a manual under preparation collecting methodologies for population growth estimates. It is also supporting migration surveys in certain developing countries. Whereas these are mainly studies of existing conventional migration data, new projects are under consideration that would take novel approaches into account with emphasis on the inclusion of population groups who may not be registered by censuses and vital registration systems, particularly the rural floating populations.

World Fertility Survey

Since Bellagio II, the most important new development in the field of demographic data collection at the international level is probably the launching of the so-called World Fertility Survey (WFS). This is a global effort to improve the knowledge of levels, trends, and patterns of human fertility through the promotion of national representative sample surveys on fertility in such a way that certain minimum standards are adopted and the results can then be compared internationally. Improved data on fertility would clearly facilitate national efforts in economic, social and health planning for development, and would provide a sounder basis for the study of population problems and for formulating and implementing family planning programs. The scheme, which is supported by UNFPA and USAID, is undertaken by the International Statistical Institute in collaboration with the United Nations and the International Union for the Scientific Study of Population.

The WFS will, in general, be a single-round survey of households so selected as to provide a probability sample, preferably one capable of providing national estimates. In some cases, it will be conducted independently; in others, it may be linked with related projects that countries are already contemplating. The scheme will strive for results of high quality, which hopefully will be achieved through the work of national teams, with the assistance of the WFS central staff. Special attention will be paid to planning, testing of

procedures and questionnaires, training of survey personnel, and careful phasing of survey activities.

Each national survey within the WFS program is expected to adopt a common set of core items, although there will be enough flexibility to take care of local circumstances. In addition, there will be an opportunity for the expansion of the inquiry into related areas of particular national interest. Among the factors to be explored are age of respondent, birth history, pregnancy history if feasible, and marital history; factors immediately affecting fertility levels such as prolonged breast-feeding; attitudes about family size; and social and economic factors such as occupation, educational attainment, and other cultural characteristics.

Depending on the needs of individual countries, the WFS program hopes to be able to offer technical and/or financial assistance required for the various phases of the survey. The technical assistance provided by the WFS may take the form either of short-term advisory visits by members of the central staff or of long-term consultants who would reside in the participating country. Such assistance will be concerned primarily with the statistical and demographic aspects of the survey, the design of the questionnaire, the sample design, the tabulation program, and the analytical interpretation of the results. It is also hoped that it will be possible to offer assistance in the fields of computer programming, training of personnel at various levels, and drafting of field manuals.

The two-year period ending in mid-1974 is the preparatory phase during which the central staff will be built up, model questionnaires will be prepared, tabulation programs will be drafted and tested, field manuals will be prepared, personnel will be trained, and agreements with participating countries will be arranged. However, some surveys may be carried out in that period if the opportunity arises. The main implementation period will be in the three years from July 1, 1974, through June 30, 1977. The timing of the surveys will vary from country to country, as they will have to be fitted in with the programs of other census and survey operations.

Arrangements are being made to ensure full collaboration with all international organizations concerned with fertility data collection and to avoid overlapping with ongoing programs. The regional economic commissions of the United Nations fully support the WFS and will provide technical support as well as liaison functions with countries in their regions. In Africa, fertility surveys within the scope of WFS may, in some instances, be developed as a part of the African Census Program.

In recent years, the Population Council has provided funding for fertility and family planning (KAP) surveys in a number of countries, but in view of the launching of WFS, it has decided to cease providing such assistance for the time being, except in cases of methodological studies that are not likely to be financed by WFS.

Demographic Research

With the increasing amount of demographic data becoming available in developing countries, the need for strengthening and expanding demographic research activities has increased. A number of governments in developing countries have, as a part of their population planning and national family planning programs, established demographic research units, or such units have already been established at universities; national population research institutes have been created or national population commissions or committees have been set up.

At the international level, a new development was the establishment of a Committee for International Co-ordination of National Research in Demography (CICRED) in 1972. It is a nongovernmental association of population research centers. Its objectives include promotion of and assistance to research projects in national institutes and/or universities, intercountry research activities, and symposia and conferences on national or broader bases. Among its activities, CICRED is planning an ambitious program concerning the preparation of national monographs on past, present, and future trends of population and their socioeconomic implications to be published in accordance with a fairly uniform pattern of coverage and format. Around 30 institutes in developing countries have indicated interest in contributing a monograph, in most cases with financial support from UNFPA. A similar number of institutes in developed regions are expected to prepare monographs for the CICRED series.

Conclusion

During the short time span since Bellagio II, substantial progress has been made toward meeting the needs for basic demographic data urgently required in most developing countries for the planning of economic and social development. It is hoped that by the end of World Population Year 1974, nearly all countries in the world will have taken at least one census during the preceding decade. This would be a considerable achievement, especially in view of the fact that in at least 30 countries, census-taking will be an altogether new experience.

Similar progress cannot be expected in the field of vital statistics. Only modest headway has been made so far by developing countries in setting up permanent systems of data collection, in extending their coverage, and in improving the quality of the data already being collected. However, a number of countries have carried out sample surveys and set up pilot schemes to temporarily fill the gap in available data or to gain experience in embarking on a national scheme. The World Fertility Survey has attracted considerable interest and support, and it is expected that internationally comparable basic fertility data will become available in a few years from some 60 participating countries—both developed and developing.

Much more needs to be done to promote the development of demographic statistics and to make better use of the scarce data already available. There exists a lack of reliable data not only on population growth, demographic characteristics of the population, levels and trends of fertility and mortality, but also on trends and composition of internal and international migratory movements.

Recent progress made has been due in large measure to the efforts of governments supported financially and technically by the United Nations, its regional economic commissions, the UNFPA, and other donors such as USAID and the Population Council. Serious difficulties, however, have been experienced in the implementation of programs, largely due to the shortage of experts and the lack of adequately trained local personnel.

It is anticipated that the financial assistance required to support developing countries in the field of demographic statistics and analysis will increase considerably during the next few years. The majority of countries now seeking assistance for their census programs will have completed their enumerations by 1975. However, assistance will still continue to be required for activities connected with the processing of data, its analysis, and the application of results. In addition, assistance would be needed on an increasing scale for conducting sample surveys and the development of vital registration systems.

Insofar as the UNFPA is concerned, it is tentatively estimated that during the four-year period 1973–1976, $29 million will be needed for support of population censuses, $3.5 million for vital statistics, and $13.7 million for sample surveys. In areas of demo-

graphic analysis and research, the estimated requirement amounts to $13 million; for support of demographic training and research institutions, $14 million; and for studies on population aspects of development planning, $7 million.

Appendix

Summary of Assistance to Demographic Statistics Activities Provided by UNFPA 1971–1973

Africa

Of the 41 member states of the Economic Commission for Africa, 18 of them have never undertaken a complete count of their population. Recognizing the fact that the continent was far behind other regions of the world in the matter of basic data collection, a comprehensive program for the collection of population data and their analysis in relation to economic and social development was formulated by a Consultative Group in 1971. It was recommended that while complete enumeration would be necessary for obtaining the total population by sex and area subdivisions, all other required items of information would be obtainable by means of sample surveys, the sampling frame for which could be provided by the general enumeration. This procedure was decided upon not only to save time and money, but also to ensure a higher level of accuracy of the data collected by making possible better selection and training of staff. The program on the whole was designed to provide, particularly in African countries that had never taken any population census, basic information on the present structure of the population as well as on the dynamics of population, including information on fertility, mortality, and internal and international migration.

Some 21 African governments have given preliminary indications of a desire to seek the assistance of UNFPA to take censuses of their population during the period 1972–1975. Since census-taking is a major operation requiring several years of planning and preparations, the support given during the first two years of the program has, to a large extent, been limited mainly to the preparatory work connected with the census operations themselves. Some examples will illustrate the assistance provided.

Funds were initially provided for the appointment of a cartographer in Nigeria so that he could undertake the task of demarcating the enumeration areas and mapping them in preparation for the population census scheduled for 1973. At a later stage, funds were provided for the appointment of a census expert and a systems analyst. Similar assistance with census experts was also given to Burundi, Ivory Coast, Liberia, Madagascar, Mauritius, Sierra Leone, and Sudan. Additional support for local salaries of enumerators, vehicles, office equipment, rental of premises, and printing expenses were given to Gambia, Madagascar, Mauritius, and Sudan.

Some countries have requested and received assistance for completing work in connection with censuses previously undertaken. For instance, the UNFPA gave financial assistance to the government of the United Republic of Tanzania to print and publish the results of a census that was taken in 1967. Assistance was also given to the government of Botswana for the production of a local film that was part of an intensive campaign to publicize the population census of 1971 and to gain the cooperation of the people in future enumerations.

Very few countries in Africa have undertaken registration of births, deaths, marriages, and divorces on a regular basis. So far, the support requested by governments related to the development of registration of vital events has been rather small—in most cases limited to fellowships for training abroad or provisions for local training of registrars. The case of Ghana, however, is an important exception: the government has requested, and UNFPA has approved in principle, support for a seven-year scheme for building up the universal registration system of vital events of births and deaths that would include financial assistance for staff, equipment, and support communication. In Zaïre, the services of an adviser have been provided to draw up a comprehensive scheme for development of civil registration. Advisers have been provided also in Burundi and Guinea to assist in preparing programs for reorganization and reinforcement of the health statistics system.

In view of the large number of countries in Africa that are now engaged in preparing for their forthcoming censuses, there seems to be limited interest in undertaking sample surveys on specific topics at the present time. There were only two countries to whom assistance was given for the conduct of special surveys during the period under review. Funds were provided for the investigation of fertility trends in Senegal and for a demographic survey in Lesotho envisaging the enumeration of a sample population in three periodic stages to evaluate demographic and vital statistics data. Assistance was provided for salaries for temporary field staff, local travel and transportation, data processing and printing facilities.

Assistance with regard to regional activities connected with the promotion and collection of basic demographic data went mainly to the conducting of two workshops held in 1972. One of these was held in Rabat, Morocco, and provided *ad hoc* training in planning and organizing a census or a large-scale sample survey, questionnaire design, field operations, data collection, and precomputer processing for 32 participants from 16 French-speaking countries of Africa. The second workshop was held in Addis Ababa for 27 participants from 14 English-speaking countries and covered training in various aspects of precomputer processing. Two more workshops—one conducted in French and the other in English—were held in May and June 1973.

To give the countries of the region, on a short-term basis, assistance with the development of census plans, formulation of country projects, organizational and administrative aspects, analysis, interpretation and utilization of data, the staff of the Statistics Division and Population Programme Centre at the Economic Commission for Africa has been augmented and regional advisers in cartography, sampling, demographic statistics, and data processing have been provided. Furthermore, to facilitate the speedy recruitment of experts required by countries, the UNFPA has given a bloc allocation of funds to the United Nations to expedite the appointment of experts, who will be ready for deployment to the various countries as soon as requests for their services are received.

Middle and Near East

Three countries of the Middle East region are planning to take their first population censuses during 1973–1975. Funds have been provided by UNFPA to Saudi Arabia for the appointment of a census adviser, a cartographic adviser, and for fellowships in demography. The Yemen Arab Republic, which has proposed a population census as a first-priority project of the government's First National Three-Year Plan, has been given assistance for the appointment of advisers in census and cartography as well as for the procurement of equipment and supplies, including punching and sorting machines, electric calculating machines, punched cards, printing, and vehicles. In order to be able to carry out its first census by 1974, the government of the Yemen Arab Republic also sought and received assistance in the form of expert services, fellowships, and equipment for the preparatory stages of this project.

During the period under review, the UNFPA gave assistance to some countries in the region for the carrying out of sample surveys to supplement and improve existing demographic knowledge. For instance, expert services and Land Rovers were provided to the government of Iran to conduct special surveys to obtain more up-to-date and reliable information on births and deaths in the country. To Syria, assistance was given for a research project that would determine the level and pattern of infant and childhood mortality and differentials due to education, occupation, income, and other socioeconomic and environmental factors. To Cyprus, assistance was given to support the position of an expert demographer and four other junior positions so that a demographic survey could be conducted and research undertaken on fertility, mortality, migration, and socioeconomic characteristics of the population. Jordan received funds for the appointment of experts and consultants, and for the purchase of electronic computing machines to conduct a national fertility survey. Assistance was also given to Lebanon, which had not taken a census for some years, such assistance being for the purpose of undertaking a survey on internal migration and fertility.

Asia and the Far East

The countries that have not yet taken a census in Asia are Afghanistan, the Democratic People's Republic of Korea, Laos, and South Vietnam. Of these, Laos is planning to take a census in 1973, and initial assistance has been provided by UNFPA for the appointment of a census expert, while further requirements will be considered later.

Funds were provided to set up a pilot registration scheme in Nepal so that the experience gained could be used to evolve a registration system suitable for the whole country. In Afghanistan, an *ad hoc* survey on fetal, infant, and early childhood mortality was supported through the World Health Organization. Furthermore, assistance was given to Nepal for the purpose of estimating population growth, fertility, and migration.

At the regional level in Asia there has been considerable interest in methodological issues connected with the analysis of census results. An expert was provided for the secretariat of the Economic Commission for Asia and the Far East (ECAFE) to prepare a manual on projections of the population of subnational areas, and another expert was added to develop research techniques for the measurement of fertility. Assistance was also provided for the conduct of a subregional training course on demographic sample surveys for obtaining vital statistics on births and deaths with the participation of trainees from Sri Lanka, Iran, Pakistan, and Nepal.

Latin America

Unlike the situation in Africa, all the countries in Latin America have taken censuses at one time or the other, and most of them have already participated in the 1970 round. An expert was made available to help the government of Guatemala draw up a program in connection with the census of population in 1972. The proposal for assistance was approved in part to allow for early implementation, while the remaining parts of the request were deferred for further appraisal.

In Haiti, the UNFPA has supported all phases of a census program including fieldwork, enumeration, processing of data, tabulation, analysis and publication of results. The UNFPA also financed a project development mission to Honduras and later assisted the government with funds for the appointment of experts and procurement of equipment.

Several countries that had taken censuses earlier also requested assistance to complete selected aspects of the work. Assistance was given to Argentina to undertake a preliminary analysis of the 1970 census results. Support was given to the National Statistical Office of the Dominican Republic to complete the processing of data after the analysis of a 20 percent sample by providing for the costs of coding, punching, and verifying the population data. The UNFPA also provided assistance for the analysis and publication of the 1971 census data of El Salvador, including assistance for an expert, equipment, and the computer time required for processing the data. Furthermore, assistance with materials and equipment was provided for the processing of data and publication of demographic studies in Uruguay.

Assistance with respect to the development of vital registration systems went mainly to two countries in Latin America, Honduras, and Nicaragua. In the case of Honduras, the UNFPA gave supplementary assistance for an ongoing project for the training of registration officials of municipalities, and for support communication to enlist wider popular participation in the registration scheme. Under the program of assistance for Nicaragua, the services of experts were provided to advise the government on the restructuring of the national civil registration system, on the strengthening of the infrastructure of the Department of Vital Statistics, as well as to assist in the training of personnel.

In addition to the assistance given to the Dominican Republic for the processing of the 1970 census data, support was also given to this country for the conduct of a multipurpose sample survey to evaluate the results of the census and the vital statistics system. The project also provided for surveys on fertility, internal migration, and manpower, as well as expert services in sampling, survey operation, and salaries of local personnel.

In collaboration with the Latin American Demographic Center (CELADE), advisory services were made available to the government of Honduras to carry out a National Demographic Survey. In this survey, four rounds of interviews were conducted to collect basic population data for analysis of demographic growth by age and sex, migration, and other characteristics of the population.

Apart from assistance given to specific countries, the UNFPA also gave support to improve the capabilities of the Economic Commission for Latin America (ECLA) to provide advisory services on a regional scale. With the assistance given by the fund, regional advisers experienced in the organization of population censuses, cartography, computer methods, sampling, and vital statistics are stationed at ECLA to provide short-term assistance to countries. The fund supported the holding of a 10-day Inter-American Seminar on the preparation and use of population and housing census tabulations. Funds were also approved for a committee of experts to meet and study steps for obtaining reliable and timely vital statistics through civil registration, to promote the use of methods developed in pilot sample surveys, and to promote the training of personnel. Furthermore, the UNFPA has provided assistance to CELADE for a variety of activities, including the organization of special meetings of experts, seminars, and technical assistance to individual countries.

1. United Nations document ST/STAT/SER.F/16.

2. United Nations documents ST/STAT .49 and E/CN .3/432.

3. United Nations Fund for Population Activities, *Report 1969–1972*, New York.

POPULATION EDUCATION: SCHOOL AND NONSCHOOL

Stephen Viederman

"Population education" is the term used to describe the efforts of the educational system to make children, youth, and adults aware of population changes and their consequences, so they may, as individuals and as members of society, make informed population-related decisions. In principle, the entire range of educational institutions within a country—both school and nonschool—are involved.

Primary attention should be directed to the development of programs at the national or subnational level. Some regional and global activities are suggested in support of these programs.

It is estimated that between $20 million and $25 million will be needed during the next five years for the initiation and institutionalization of school and nonschool programs, and to support regional and global activities. At the end of the program development phase, estimated at five years, the need for special funds from external donors for population education programs will hopefully decline as the programs are integrated into the educational system.

Population education may be defined as the educational process whereby individuals learn (1) the causes and, most important, the consequences of population phenomena for themselves, their communities, and the environment, and (2) the possible effective means by which the society as a whole and they as individuals can respond to and influence these phenomena in order to enhance the quality of life now and in the future.

The emphasis in this definition is on learning rather than teaching. It assumes that the average individual is more concerned with the consequences of population phenomena as they affect his own life in his family and community than with the causes of these phenomena, and focuses on these consequences in order to enhance learning. Lastly, it focuses attention on those things that the individual can do, as an individual and as a member of society, in order to influence population changes for his own benefit and for the benefit of the society. It follows naturally from this definition that for learning to be effective, population phenomena at either the macro- or the micro-level must not be seen as isolated phenomena, but rather as part of, affected by and affecting, an integrated developmental process.

The phrase "population education" has been until recently synonymous with "school programs," particularly at the primary and secondary level. Now, however, it is being used increasingly to describe an educational process that takes place in universities and in nonschool organizational settings as well, including, among others, programs of agricultural extension, literacy, adult education, and community development. The audience includes schoolchildren, out-of-school youth, and adults.

The goal of population education programs is to make people aware of the nature of the population changes that are occurring, and of the consequences of their own population-related behavior, including fertility, migration, employment, age-at-marriage, and so forth. It is anticipated that as a result of this awareness, people will be able to make informed, conscious decisions concerning their population-related behavior, both individually and as members of society.

Population education for youth is concerned with the medium to long term. By developing awareness of the population situation and what might be done about it, it is hoped that crash programs in education and mass communication in the future will be less needed. Programs directed toward adults hope for a more immediate influence; for example, on the acceptance of family planning, or delays in the age of marriage, or on decisions to migrate from rural to urban areas, or in support for governmental population policies.

The content of population education covers a broad range of subject matter, much beyond traditional demography. It includes information on the population situation (size, growth, migration, distribution, trends); on the relationship between population and the quality of life now and in the future (for example, food, health, education, employment, urbanization, the environment, socioeconomic development, and family life); on possible action programs (both governmental and individual); and on human reproduction as a means of implementing one aspect of individual actions (human physiology, human sexuality, family planning, and contraception). Both macro- and micro-level data are included. The exploration of values and attitudes is also seen as an integral part of the learning process.

Since most, although not all, nonschool education is directed to audiences already in the reproductive ages, the focus is often on content that might contribute to the acceptance of family planning and contraception, and might stress, for example, the effect of family size on family life, health, and so on. Other programs are directed to elite audiences hoping to obtain their interest in and support for population policies. The focus in these programs might be on the relationship between population change and the quality of life. In all nonschool programs, the goals of the program, the sociocultural characteristics of the society, and the life experiences of the participating individuals should be taken into account in determining the content of the programs. Unfortunately, the knowledge base from which program content can be developed is weak in many cases. The individual learner is most concerned with the consequences of population changes at the micro-level, whereas, until recently, most demographic research has been primarily concerned with the determinants of change at the macro-level. Therefore, more social research is urgently needed; for

example, on the relation of population change to various aspects of family life and to the quality of life.

School programs cover a wide age group. By far the largest proportion of students in schools in the developing world proceeds no farther than the primary level. But as a result of late first enrollments and considerable repetition of grades, many primary-school students are already in or very close to the reproductive ages. The focus of programs directed to these students is on the nature of the family and family life, and the impact of population. The smaller group of students who stay in the formal education system through secondary school, and even university, represents a latent elite. They are often the people who will assume positions of leadership in the years ahead. Programs directed to them, therefore, emphasize more policy-related issues, such as the relationship of population change and the quality of life.

The broad scope of population education content touches in one way or another on most subjects included in the school curriculum. As a result, in most programs, information and analytical skills are being infused into the already existing programs as appropriate to the intellectual and emotional level of the students' development. Evaluation of the effectiveness of this infusion approach, in relation to other approaches such as the development of separate courses, is part of the future agenda for the field. Decisions as to what actually should be included in the school program have been based upon: (1) political and cultural circumstances (for example, the acceptability of talking about population or sexual matters); (2) assessment of the school's ability to deal effectively with certain concepts, particularly those that are personal and potentially sensitive (such as contraception and sexuality); and (3) the goals and objectives of the program.

It is often argued that school programs should focus their attention on the primary level, since most children in the developing world receive no further formal education beyond that level, and because these are believed to be formative years in terms of development of population-related attitudes, particularly with regard to fertility. There is an implied assumption that this will be the last or only time that students can or will be exposed to population-related materials. If this were so, it would be unfortunate, since it is at the primary level that the knowledge base for population education programs is weakest. We know little about the nature of population learning, nor do we have the content of population education sufficiently well-developed to prepare materials that are simple without being simplemi:.'ed. Furthermore, we do have some indication, at least with reference to literacy and numeracy, that knowledge and skills are lost if children do not continue their education, or are not in a position to make use in some meaningful way of what they have learned.

Until very recently, plans for developing population education programs—whether school or nonschool—were developed independently of one another, as if each of the component parts existed in a vacuum. However, stemming from the growing awareness that learning takes place in different settings and at different times, population education planners are now beginning to look at the educational system as a whole, including school *and* nonschool. Table 1 suggests a schematic matrix for analyzing and planning the content of population education programs. In order to determine which cells will be filled, and which left blank to be filled by another part of the education system, the planner needs: (1) a broad and encompassing set of goals and objectives; (2) an assessment of the strengths and weaknesses of the various institutions within the system with respect to these goals and to the handling of the particular content; and (3) information concerning the sociocultural characteristics of the society. It is assumed that, to the extent possible, each individual should receive the maximum amount of information, limited only by the level of his intellectual development and capabilities.

Adoption of this overall population education planning concept has obvious implications for the organization and administration of programs, as indicated in figure 1. A unit is needed to assume responsibility for developing educational goals and objectives, and for coordinating the activities of the whole range of educational institutions and organizations that may contribute to population education either through action programs or through training and research activities. Cooperation among a range of governmental agencies now involved in educational programs will be required. School programs will have to come under the aegis of the Ministry of Education, which may also have responsibility for some aspects of nonschool education. Other ministries, including for example, agriculture, labor, and social welfare, will have relevant educational programs under their jurisdiction that must be coordinated with each other and with school programs. For overall planning to be effective, patience will be necessary.

Progress in School Population Education

In the paper prepared for Bellagio II, we identified 11 countries in the developing world with one or more population education projects or programs under way in schools. In addition, 24 countries were listed as having expressed an interest in the field.

During the last two years, the situation has changed. In Africa, the one national project (in Tunisia) now appears inactive. No other national program has been started, although a strong statement of interest was voiced by the government of Kenya in January, 1973. At the same time, a multinational project, linking social studies educators in 12 sub-Saharan African nations, is likely to get under way before the end of 1973.

As before, the greatest activity has been in Asia. The Indian program is now active both at the national level and in at least five states. Philippine children are already being exposed to population materials in their classrooms, and the government has just authorized universities to reduce the required teaching of Spanish by half in order to provide room for curricula on current issues, including population. Of the seven Asian countries listed in 1971, only two—Iran and Nepal—have not proceeded with program development to any great extent. During the same period, however, Malaysia, Sri Lanka, and Thailand have made significant efforts, bringing them into the group with programs in process.

In Latin America, with the exception of Colombia, the emphasis has been on sex education. However, there are recent indications that a number of these projects are adding a significant demographic and population component.

Table 2
Status of School Population Education in the Developing World, March, 1973
Projects or Programs Planned or in Process[a]

Africa		Latin America
African Social Studies Programme		Colombia[b]
		Costa Rica
Asia		El Salvador
India[b]	South Korea	Panama
Indonesia[b]	Sri Lanka	
Iran[b]	Taiwan	
Malaysia	Thailand[b]	
Philippines[b]		

a. There have been additional indications of interest from Bangladesh, Pakistan, and Turkey in the Asian region, as well as some activity in Guatemala and Jamaica in the Latin American region.

b. Denotes more than one project or program.

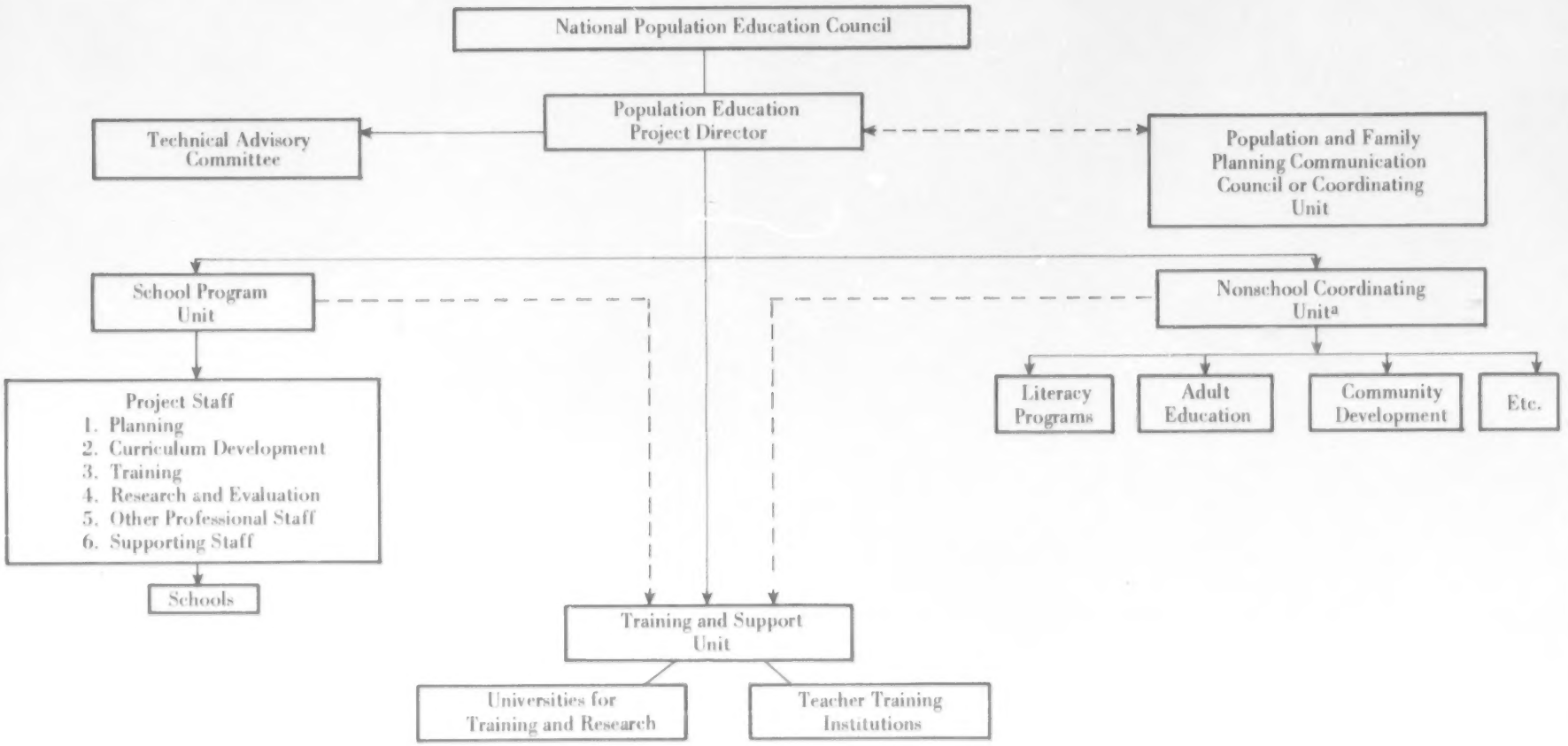
Table 1

Matrix for Analyzing and Planning the Content of Population Education Programs

The Educational System		The Population Situation					Population and the Quality of Life Including:								Action Programs		Human Reproduction		
	The Content of Population Education	Size	Growth	Distribution	Migration	Trends	Food	Health	Education	Employment	Urbanization	Environment	Socioeconomic development	Family life	Public policies and programs	Individual and family choices	Human physiology	Human sexuality	Family planning and contraception
Urban	Universities																		
	Teacher-training institutions																		
	Secondary schools																		
	Primary schools																		
	Out-of-school youth programs																		
	Adult education																		
	Literacy programs																		
	Community development																		
Rural	(As above plus)																		
	Agricultural extension																		

Figure 1

Organization Chart for a Hypothetical National Population Education Program



SOURCE: Adapted from J. E. Jayasuriya, Communication, July 9, 1972, UNESCO Regional Office for Education, Bangkok.

a. In this chart, the nonschool unit has primarily a coordinating function. In some cases, however, a regular project staff, such as for school education, may be called for.

The Status of Nonschool Population Education

It is doubtful that anyone has a comprehensive picture of nonschool population education in the developing world today. Within the United Nations system itself, a number of the specialized agencies have extensive programs planned or in process. ILO has population education programs for workers and employers in various parts of the world. FAO's Program for Better Family Living incorporates population-related concepts and materials into their activities directed to rural populations. UNESCO's programs in literacy, in education for rural development, and for youth either have or are planning population components. UNICEF and WHO also have relevant program activities.

Private organizations are also playing an important role. For example, IPPF has a particular interest in educational programs for out-of-school youth, and held a major workshop on that subject for the Asian region in 1973. World Education (New York) has provided technical assistance and financial support to a number of experimental family life planning projects in different parts of the world.

In Thailand, a pilot functional literacy project has incorporated family planning and population information into a total family life planning curriculum developed on the basis of the self-perceived needs of the community. The result appears to be fewer dropouts from the literacy program and greater acceptance of the family planning concept. A similar program is being developed in Turkey, where the materials are also being used in the army's educational program for illiterate recruits. In Iran, soldiers are used to provide educational programs for rural populations. Other projects in Asia are found in India, Indonesia, Malaysia, and the Philippines.

In Colombia, a pilot community education project is being developed by the Family Planning Association in cooperation with the Coffee Workers Association. In Honduras, the Family Planning Association, the National Association of Campesinos, and the Ministry of Education are testing the acceptability of population/family planning information in various educational programs. In Costa Rica, population education texts are being developed for use at different literacy levels.

Activities in Africa, at present, appear to be limited to those of the international agencies, such as the FAO Program for Better Family Living in East Africa.

A survey of existing and planned activities would be useful to assess the present state of the field and the degree to which activities are complementary or overlapping. This would also aid the diffusion of innovative and tested program ideas.

Needs for Program Development at the National Level

The needs for population education program development within the developing world are fundamentally the same today as they were two years ago. Although there has been some progress, more needs to be done. Donor agencies can assist in the development of programs within countries by providing funds for the following purposes:

1. The creation of a favorable climate of opinion among responsible leaders in education and population in order to insure the necessary political and administrative support for program development;

2. The training of sufficient skilled manpower knowledgeable about population education to develop program plans and strategies for implementing these plans;

3. The creation of a coordinating unit to develop population education policies, objectives, and priorities for program development;

4. The development of educational and research institutions within the country capable of providing intellectual support for the program, both in terms of the content of population education, and in terms of basic and applied research necessary for materials planning, training, and evaluation;

5. The development of materials both for teachers and learners, including source books;

6. The development of teacher training programs;

7. The creation of research and evaluation programs; and

8. The provision of short-term consultation and resident advisory services, as necessary, to expedite the development of the above activities.

No country, as yet, has developed the whole range of institutional arrangements necessary to support coordinated population education programs. Particularly lacking are the university and research institutes that might provide institutional backstopping for program activities, in terms of both the process and the content of population education. In some but not all countries, separate units to direct either the school *or* the nonschool portion of the program exist. Efforts to coordinate these sectors are in the very early stages and should be encouraged.

A particular concern for school programs is the absence of a clear conception of the content of population education from which program materials can be developed. In some cases, what is needed is the drawing together of already existing knowledge and concepts into a unified whole. An effort to accomplish this in the form of a source book for teacher trainers and curriculum developers is now being undertaken by the UNESCO Regional Office in Bangkok. More often than not, however, the basic research is lacking, particularly at the micro-level. For example, we need to know much more about the impact of population change on the individual and the family. Here the needs of school and nonschool educators coincide.

It should be noted that the field of population education, both school and nonschool, is still in its infancy, having its formal beginnings during the last five years. It is only during the last two or three years that anything approaching a critical mass of attention has been paid to the issues involved. Thus, immediate results cannot be expected. However, criteria for measuring the effectiveness of programs should be developed early in order to avoid misunderstanding later.

Regional and Global Activities in Support of National Efforts

Population education programs must be developed on a national or subnational level. There are, however, a number of activities that can be undertaken on a regional or global level to support in-country program development. Most of these activities should be temporary, until the in-country capacity to carry them out is fully developed. These would include:

1. Programs to train leaders for national programs either through short courses, vacation programs, or in special programs of three to six months' duration;

2. Development of mobile educational teams to assist in teacher training programs, with the design of research and evaluation, and with materials development, as well as to conduct seminars and workshops for educational leaders in countries developing programs;

3. Technical services to national curriculum development groups, including accuracy checks for materials developed in countries where qualified population specialists and others are in short supply; and

4. The development and adaptation of research and evaluation instruments and projects.

There is another set of activities that can and should be undertaken at the regional and/or global level whose value will remain even when national programs are fairly highly developed. These would include:

1. Development of a journal, an abstract service, and a newsletter to report on important scholarly and program developments in the field;

2. Development of a repository of learner and teacher materials, including audio-visual materials, from the region and from other parts of the world;

3. Convening of seminars, workshops, and conferences on specific topics, such as evaluation, teacher training, or materials development, as necessitated by developments within the region;

4. Translation and dissemination of important materials from other languages;

5. Preparation and dissemination in popular form, for teachers and other lay audiences, of the products of population-related research done at population research centers throughout the world but applicable to the region; and

6. Maintenance of a directory of specialists in population education.

Although curriculum materials are most effectively developed at the national or subnational level, the processes by which materials and programs are developed can be shared. There is a clear need to diffuse the results of pilot projects and to engage in analysis of program factors that explain what happened and why. Similarly, research maps must be drawn to facilitate program activity, and to establish research and development priorities. These needs might best be achieved through a network of institutions working in population education, similar to those already operating in other fields, such as the International Committee for Contraception Research and the International Committee on Applied Research in Population.[1]

During the last two years, some progress has been made toward meeting some of those needs that can serve national programs at the regional level. UNESCO has assigned population education specialists for school programs to their regional offices for education in Bangkok, Dakar, and Santiago. The UNESCO Bangkok office has also received approval to establish a clearing house and a mobile team for the development of school programs and is also developing a source book. In Latin America, UNESCO's Regional Office has helped develop a number of seminars for educators. UNESCO's activities in North Africa and the Middle East and in sub-Saharan Africa are, however, at a lower level of intensity.

The nonschool area is more diffuse and regional activities are less clearly defined at present. Thus, for example, ILO has established posts for workers' population education advisers in all regions to coordinate their programs. FAO has a central staff in Nairobi coordinating activities for the East African region. However, no agency or group of agencies has, at present, the field staff and activities that are required for expeditious development of the field.

The Role of UNESCO

Two years ago, in speaking of school population education alone, we observed that "for the kind of program envisaged here, a central international responsibility is needed to stimulate, promote, guide, supply and support the overall effort." The need still exists, especially in view of the broadening of the field to include nonschool programs as well.

Two years ago, we suggested that UNESCO would be the "natural agency" to assume the task for overall coordination. That too is still true. However, in reality, it is clear that UNESCO is not yet ready to play the leading role for international development in the field of population education. Whether recent changes in the organization of UNESCO's population program, both within the education sector and overall, will result in the dynamic leadership that is necessary cannot be predicted at present. It will probably take 12 to 18 months before that question can be answered.

For the interim period we offer the suggestion made two years ago: that UNESCO convene a meeting of donor agencies concerned with the development of population education programs in order to develop a donor's strategy for determining which of the national, regional, or global needs will be assumed by which agencies and with what priorities. To be included also would be the major universities and research centers that are making important contributions to the theory and practice of population education. Failing UNESCO action, a network, such as that presented above, might serve the coordinating function.

The Costs

Although base line data to make an accurate appraisal of the costs for the development of population education programs in the developing world are not readily available, it is clear that the amounts involved are significant and should be recognized as such from the beginning.

School population education costs are estimated at between $6 million and $8 million over the next five years for approximately 15 country programs. This estimate is based upon an average of $100,000 per country per year, and on the assumption that approximately five years is needed from program initiation to program institutionalization. Obviously, in larger countries, such as India and Indonesia, additional costs can be anticipated simply due to the increased magnitudes of students and teachers. Increases may also arise in countries where educational planning, materials development, and teacher training are decentralized.

Individual nonschool projects tend to be less costly than school programs because they are usually directed toward smaller, more clearly defined audiences. A well-coordinated, multifaceted national nonschool program, however, might well cost as much as a school program. Thus, an additional $6 million to $8 million might be estimated as the cost of nonschool programs in 12 to 15 countries during the next five years.

Regional and global activities in support of school and nonschool programs, as described above, are estimated at approximately $1.5 million per year, or $7.5 million for the five-year period.

Overall, we might anticipate financial needs from outside donors in support of national population education efforts on the order of $20 million to $25 million for the next five-year period.

The financial needs of population education programs differ from many other activities in the population field. Family planning program costs, for example, can be expected to rise as demand rises. The costs for population education are, however, basically

start-up costs; among other things, to train teachers already in the system, to do research and develop new materials, and to develop preservice training programs. Once these changes have been institutionalized, special costs will decline rapidly, and the remaining expenditures for such things as the revision of materials will become part of the country's regular educational expenditures. Outside funding will, therefore, make a permanent contribution to the educational system without outside agencies having to assume a permanent commitment to continued funding.

Postscript

A number of the activities necessary for the development of population education programs are related to other activities in the population field. Thus, the need for education and research institutions to provide intellectual support for program development should be considered by individuals concerned with institutional development. Similarly, greater communication and cooperation between social science researchers and educators will be of benefit in dealing with some of the problems of population education content referred to above. It is hoped that population education needs will be included in discussions of these and other related fields, in order to insure the highest standards of program development.

1. A committee to plan such a network and to determine its feasibility was formed in April, 1973, under the chairmanship of Sloan Wayland of Teachers College, Columbia University. It is working closely with UNESCO and UNFPA in this effort. Members are from Australia, the Arab Republic of Egypt, Guatemala, Kenya, and the Philippines, in addition to the United States.

SUMMARY
Moderator: David Bell

BELL: I am not going to make any attempt to cover everything that has been said at this table during the past two days. This is simply my personal sense of the highlights of this conference.

First of all, it seems to me that the overall impact of the reports and the discussions is sobering. There are two main reasons for this: We were all impressed by how large are the problems, how slowly we see improvement, and how little we know about how to proceed. As Mr. Tabah put the matter yesterday, we don't know how to explain the demographic facts that we do see, and we don't know nearly enough about the demographic facts, we don't know how much our family planning and other action programs have contributed to such mild improvements in the demographic facts as seem to be showing up here and there.

There's another reason, it seems to me, why the discussions at this conference were sobering. We have all been greatly impressed by the breadth and the complexity of population problems, and by necessity the breadth and complexities of the policies and programs that are needed to deal with those problems. For example, there is impressive testimony that individuals see family planning in a context of family problems—child health, nutrition, family health, housing, and so on. This raises the question whether family planning programs can be effective by themselves, or whether we should move into a period in which family planning will be integrated into action programs for comprehensive family health, or maternal and child health, and nutrition. Mr. Berelson suggests that we might even be seeing a watershed in our understanding here. That is not an agreed point; past experience suggests that family planning has tended to be deemphasized when integrated into broader health programs. Nevertheless, I think we would all agree that we must see family planning in the context of a broad set of family concerns, and even if one argues that family planning programs can be useful by themselves, other programs must be coupled with them if they are to appeal to the real needs of people and their sense of what is important.

More than this, however, we were advised by Professor Okediji and others that it is necessary for us to understand population problems in the complicated interrelationships with the broad process of development. We can no longer think about population issues as isolated or separable. There are no simple one-way relationships, if I recall Professor Okediji's phrasing correctly. Or, as Mr. Townley put it very succinctly, we must learn to see population policy as part of development policy, with all the complex ramifications that implies.

The fact that we have to see these matters more broadly and in more complex terms may bring benefits as well as costs. Early in the conference, there was reference to the rays of hope that are being offered by James Grant and William Rich and others—the thesis that sensible development policies that emphasize widespread benefits from economic growth and which give special weight to opportunities for lower-income groups may contribute significantly to raising the motivation for reducing birthrates. This is an illustration of Professor Okediji's point that there are two-way relationships, and a sound development program may contribute greatly to effective work on population problems. There is much to be studied before we could speak with complete confidence about all this, but this conference, it seems to me, left none of us with any doubt as to the urgency of pursuing these questions of the interconnections between population and development.

The complexity of the population problem does not stop with the matter of seeing family planning in a larger family health context, or with seeing the interrelationships between population policies and development policies. Many examples were given of additional elements of complexity. To cite only one: the point that Dr. Concepción, Mr. Berelson, and Professor Okediji made that differential rates of population growth among different ethnic groups can create serious political problems within and between nations. This is a point that is obviously applicable in more developed as well as less developed countries.

It was largely for these reasons, that I felt that "sobering" was the initial description of this conference. We must accept the fact that we don't know very much about the problems and that they appear increasingly complex the more we study them.

The second major highlight of this conference, it seems to me, was the many contributions made by our guests from less developed countries. Among these contributions I would cite two. First, the blunt, honest, and impressively unanimous testimony they gave that foreign assistance for population programs in the developing world is seen too often as too simple, too coercive, too narrow. This led to a most illuminating discussion, highlighted by the general acceptance around the table of Dr. Patiño's plea for approaching all aid programs in a spirit of partnership and full cooperation, and of Professor Okediji's urging that foreign aid agencies be careful to clarify their motivations, to emphasize their support of development programs aiming at improving the quality of life and the freedom and opportunities for the people in developing countries, and to provide broad programs of assistance, because only within such programs of assistance will aid to population and family planning activities be acceptable. There were notable contributions to that discussion from Mr. Gérin-Lajoie, Mr. Gille, and many others. I believe it was a strong element of the consensus we reached during the conference.

Against the background of that exchange, it was especially impressive to hear Mr. Kieffer describe the new policy of the United States AID program to offer combined assistance for

health, nutrition, family planning, and other population activities, and to aim its assistance especially at lower-income groups, both urban and rural, within less developed countries. I can perhaps be forgiven for a small personal footnote that Mr. Kieffer's comments had special meaning to me, since I was in AID in 1963, when the last of the old health assistance projects were being phased out and we were beginning to try to find a sound basis for addressing population problems from the U.S. government's point of view. It has been a long struggle, not always glorious, and I bear my share of the blame for the fairly slow progress. It is therefore a special pleasure for me to hear that we are in sight of a sounder and more effective framework for American contributions to population problems.

The second particularly valuable contribution of our guests from less developed countries that I would cite was their constant polite reminder, by their presence as well as by what they wrote and said, that there are steadily larger numbers of skilled and sophisticated scholars, teachers, researchers, managers, officials, persons of many other occupations in the developing world who are steadily learning more about population problems. We are approaching the day (I believe Mr. Hopper has reference to this in his paper) in which the best skills and the most knowledge will be found in the countries where these problems are most serious. It is therefore not simply a matter of political sensitivity but a matter of effective procedure to adopt a partnership approach to population problems.

The third main point in my own summary of this meeting—and this is the major conclusion for action that seemed to stem from our deliberations—is the overwhelming consensus among us on the need for rapidly increasing the amount and pertinence of social research to underpin population policies. We came to this point repeatedly, from many different angles, and I felt myself that our consensus became stronger and clearer as the conference proceeded. We identified a variety of major needs for such social research, using the term "social research" in a broad sense—including, for example, Mr. Tabah's plea for larger sample surveys and better-planned, better-analyzed, repeated rounds of questioning; Mr. Hopper's insistence on research aimed at elucidating the causes of human fertility behavior; and Dr. Concepción's appeal for research on urbanization and migration. All these and many other issues of immediate significance to population policy were cited, calling for social research of an urgent nature and on a larger scale than is now the case.

I think we agreed that the principal means to achieve the needed expansion of social research is to step up greatly the support for social science research in developing countries, using the social science capacity that is there now, to increase the scale of training for social scientists in less developed countries, and to help develop social science research institutions in those countries that can provide employment opportunities for those trained. We talked about many of the difficulties that will need to be overcome in accomplishing these objectives, and they are serious: the need to find people and to take the time to train them well, to assure them employment and other support, and, above all, to devise effective links between the results of research and the policy-making process. All these problems are difficult to deal with. Indeed, one of the few points of difference I would have with Mr. Hopper's summary of the programs that have been under way is that he considers that we have been neglecting the subject of social research since Bellagio I. My own experience is that we have not neglected the problem of social research; we have been working hard at it. But we have found that it is a slow, step-by-step business; for example, it took about two years to design and commence the joint program by a number of Latin American social science centers to engage in comparative studies of population issues.

None of us considers that the needed expansion of social research can be accomplished easily. Nevertheless, the validity of this objective and its importance to our purposes seem to have received solid support, which has led to our major conclusion for increased action. Someone voiced the challenging thought that we should establish the objective of building systems of research and policy application—systems that will substantially involve social scientists in the less developed countries and link them with social scientists in the more advanced countries and in international organizations, in order to bring to bear on the policy process the best that we know and the best that we can learn. Moreover, all of us agreed, I believe, that we are interested in increasing social research in less developed countries not simply because we need to know more about population problems and to design better policies, but because it is the indispensable basis for building public understanding in those countries, for achieving wider and deeper education of the citizens, and for developing the firm and lasting commitment of the leaders.

These brief comments have not done nearly full justice to the many-faceted, illuminating discussions of this subject in our conference. I do want to note one more point before moving on, which was mentioned only in passing, but which perhaps ought to receive the attention of this group on some other occasion. This is Mr. Berelson's question, put in his initial paper: How can we learn more about China and what the Chinese experience might suggest for the rest of us? We need to attain an analytical understanding of the Chinese experience in sufficient depth and clarity so that we can make comparative judgments about what has been effective in the Chinese setting and which elements if any could be applied to other settings. It seems to me this is an extremely important task, and I regret that we did not have time here to discuss how we can achieve such an understanding over the months and years immediately ahead.

The fourth main point I would note from this conference was the report of solid progress in working toward improvement of contraceptives. We heard encouraging reports from Dr. Segal, Dr. Perkin, Dr. Ravenholt, and we heard them perhaps with the more satisfaction because earlier Bellagio meetings had made some contribution to the concepts and to the funding that underlie current progress.

Our medical colleague warned us, however, that while the present types of contraceptives are being significantly improved, no new departures are currently in sight. This means that family planning for years to come will have to rely on technology that we have all seen is too expensive, too complicated, too dependent on the medical profession, too hard to distribute to be easily applied in low-income countries. Also, there is uniform testimony by our scientific colleagues that we must be careful to assure continued attention to fundamental research on human reproduction, and not swing all the way over to a concentration only on contraceptive technology.

With respect to financing, Mr. Harkavy and others urged us in salutary fashion that while we are right in wishing to give more attention to social research, we should not slacken but indeed should continue to increase the funds available for the support of biomedical research—both basic and applied. Although everyone in a conference like this is exceptionally cautious about expressing anything that might be regarded as a financial commitment, I believe it is fair to say there was agreement around the table that

Mr. Harkavy's point is correct, and that it is not our task now to shift funds away from biomedical research to social research, but instead to increase funds for both purposes.

One last item under the general heading of biomedicine. An important point was noted, though not discussed, namely, that there are increasing numbers of qualified scientists in the developing countries who need help in becoming effective experimental scientists and medical leaders in population work in their own countries. The point is valid and warrants continuing attention.

The fifth main point, of course, was the discussion of delivery systems. We have just had that discussion, and I mention it only briefly by way of summary. We had before us Mr. Gille's interesting and comprehensive paper with encouraging news on two main fronts. First, increasing funds are being applied to delivery systems, including large and increasing funds from the budgets of less developed countries, and very substantial contributions from donor agencies. Second, there are steadily larger numbers of interesting innovations and pilot experiments. Even though a lot is going on, however, the situation is far from satisfactory. This is no doubt understandable with the relatively new and untried institutions that are involved, but it leaves all of us with much work ahead.

It seems to me the agenda immediately before us—first, with regard to public sector family planning systems—is to obtain much more information and analysis on what is working, what experiments look promising, what is being learned. We need to promote and support more experiments and studies, particularly in rural areas, which, as Professor Okediji reminded us, are the hardest to reach and the least successfully dealt with so far. The Population Council's new coordinating committee (ICARP) ought to help in this regard, but obviously a good deal more than that committee is needed, and all of us should have the feeling that the process of developing better public sector systems is just begun.

Secondly, with respect to the private sector, as Mr. Gille reminded us, much work has been done since the last Bellagio meeting on how to encourage more use of private sector distribution systems. Specific proposals for an internationally led effort are before the IPPF, and potential support was expressed for this program. AID and the Population Council are also supporting experiments and there are, of course, important experiments going on under the aegis of people who are not in this room. India already has a major experiment under way and is considering another, and there are thousands of private sector persons, like Dr. Patiño's pharmacists, who are at work and in a sense conducting important experiments, although we do not know as much as we would like about all that. There seemed to be a clear consensus that the private sector distribution system is an important element of any strategy to limit population growth, and we ought to support and encourage activities along these lines with appropriate careful attention (as Dr. Engstrom and others noted) to health precautions and to medical safety.

We have probably not dealt effectively with the broad subject of manpower development, having touched on it only in part. Mr. Hoggart suggested correctly that population education is an extremely important field and that we have not given it sufficient attention. And the broad matter of population information and the understanding of population problems, issues, objectives, and policies among people in more developed countries and less developed countries is a vital field of interest that we have not discussed here.

Although I have found this conference sobering, I think Dr. Knowles was quite right—it has also been a very illuminating conference: most of us have learned a great deal, and in these papers we have serious contributions that will have a good deal of effect in the period ahead. I should pause at this point and ask for additions, amendments, major qualifications, significant quarrels, with any of the points that I have made.

KIEFFER: I really want to bear down on just one point. I still believe that the initial task that we're all really going to have to get to—it's the basis for whatever else we do—is to develop some understanding of the different perceptions people have of what we're all about. Some people thought I was pessimistic. I did not offer it in the spirit of pessimism, and I don't feel pessimistic at all. I simply feel that elemental communication is involved here among ourselves and obviously in connection with the LDC's. There are different perceptions about almost every facet—why we offer population assistance, and the kind of assistance, and the outcomes, and the time frame in which we do all of these things and think about all these things. So my feeling is that we must find the time and the means for coming to a very realistic understanding of these perceptions. I'm not talking about agreement. The thing to do is to find out what these perceptions are and to negotiate from that point, and build action from that point.

McNAMARA: It's not a point, but I would like to make a plea, although Dr. Knowles mentioned this, that the position papers should receive a wide circulation. There is a tendency for conferences like this to be kept in files and archives, and yet they are very important. Because important ideas have been developed here, and for countries trying to establish a national population council, I think that this would be very important for them to have.

BELL: If there are no other major comments, we need to turn now to another point. I believe there was some consensus yesterday that something is needed by way of an organization with a watching brief. Something is needed to help us all with regular, periodic evaluations and assessments as to what is happening with respect to the world's population, and the efforts that are being made to deal with it. We are particularly in need of impartial, nonpolitical, professional judgments. We had before us a brief outline by Mr. Hopper as to how we might deal with this, and I have asked him if he would be willing to come back and present "Hopper, version 2." He's had time to sleep on it and hold a good many corridor conversations. Reactions since yesterday are valuable and important. Perhaps he can present something concrete for discussion.

HOPPER: I echo what has been expressed in terms of your summary. I think it's an excellent summary from which to start a discussion. It's not only the breadth and complexities of the fields we've reviewed here that impressed me. What impressed me while I was doing the overview paper, and what impressed me very much in view of the much greater wealth of comment that came out during the course of this discussion, is the breadth and complexity of the present programs that are already in the field to deal with population problems. In the review of the agency work, I was quite startled at the really rather significant rise in funding that has occurred in the last two or three years. It has not been as great as I think some of us would like, but it is certainly greater than it was, and I have no doubt that in the future it's going to be still larger. My worry, and I think the worry of some of us around the table, is that we have funds to invest and the question is where to put them. It was much simpler before, when there was very little money going to these problems, because you had lots of choices open to you. Now the programs are becoming more complex; they're beginning to mesh. I came away from yesterday afternoon's discussion with even more of a conviction that we do need some kind of a

more formal institutional mechanism—I don't want to call it an institution—that will provide us with this watching brief, some arrangement that will provide a review and evaluation of activities and present nascent requirements as these emerge in the field of study and the widening sweep of the population problem. I think it's a watching brief; it's an early alert system; but it's also a dispenser of appropriate progress reports, because I think it's got to be prepared to appraise and to serve as one of the agencies diffusing the success stories about activities and operations programs. I say one source for this activity, because there are many, many others around. I would follow on Mr. Bell's comment that I don't see this mechanism as being an operating mechanism, I don't see it as being a particularly funding or pledging mechanism or fundraising mechanism, and it certainly would have no specific control function. Its operation would be through some sort of moral suasion and the sheer technical competence of the appraisals and the scrutiny it gives to areas of the problem. The question was asked yesterday as to who would receive the reports of any such technical body who might do this operation. I think that's where I'd like to begin. I think it needs to be a council of the donors with a very liberal representation of the LDC's. There are mechanisms within the UN agencies for obtaining the LDC representation, and I think those should be tapped, but I think that the primary reporting purpose here is to establish a dialogue between those who do have monies to put into population and the potential recipients in the LDC's about the problems a technical review mechanism might bring forth. This might be a rather large council, because I think attendance or participation on the council would be on the basis of the desire of the donors or the LDC nations. But it would be much too large a council to come to any kind of substantive sort of operating review. It would be a council that could turn the technical scrutinies to their own review of people and to their own internal mechanisms or further studies and hope for action. I used the agricultural model as my take-off point on this. I did so because I think there is now almost three years of experience with this model, and I think it has grown and become really more than any of us who earlier participated thought it could become in that period of time. There are obviously many dissimilarities between the agricultural field and population field, and therefore the total agricultural model could not be transferred to population. Therefore, Mr. Chairman, I'm suggesting not only the need for some mechanism to fulfill this function; I would also suggest that there be called a further meeting of the technical personnel of the various agencies represented around this table to prepare a proposal for such a mechanism that would undertake the task that we've outlined, to fill the need for a watching organization and to suggest the terms of reference for such a mechanism, and to outline some operating guidelines by which the mechanism could function. I'd like to propose a meeting of the technical people within the next few months so that the proposal (hopefully no more than three or four pages) could be circulated to the agencies represented here, to other donor agencies, and to those of our friends in the developing countries who are related and concerned with population, seeking their comments and further guidance. I'd like to suggest also that with this proposal go an invitation to attend a meeting in December or January at a place that we can decide upon to discuss and to act upon the proposal so presented. I think this would give us time to reflect upon the nature of the mechanism; it would give us time to encompass and insure the representation of agencies such as IPPF (of which I can think of no counterpart in agriculture) and so on, to make sure that we do have a balanced representation on the council and, considering the possible technical advisory systems to that council, a balanced coverage of the fields that must be embraced if we're going to accomplish successfully the purposes for which the council will be established.

BELL: That, then, is the current proposal. It comprises a council and a technical advisory committee as the principal units to be created, with functions not of policy-making, not of control, not of operating, but of analysis, evaluation, information, leading hopefully to better judgments and better decisions by those who are involved in the council and others who would be informed about its views and findings. The proposed work schedule would comprise a technical meeting of those agencies that wished to participate some time in the next few months, and a meeting in December or January to review the proposal and to act upon it.

Do you wish to complete the proposal and suggest who might take the responsibility for calling the first meeting and the second?

HOPPER: I hoped that we could have some volunteers. We've done so well with Rockefeller up until now, that I would volunteer their services. I have agreed to participate as a junior partner in this with the two major foundations.

GILLE: I think it is somehow necessary to relate this to the operations in the UN system; in particular, the preparation of a World Population Plan of Action in 1974. This plan, to be considered by governments at the World Population Conference, will consider institutional arrangements and coordination questions related to population programs supported by foreign aid.

TABAH: We certainly must consider the political issues if this meeting is to succeed. . . . I think it should be within the UN somewhere.

I would say that before you have this first meeting, someone or some group should review and evaluate what we already have in terms of coordinating mechanisms, to see where they fit in, so we don't superimpose this when we have other structures that could be used. Some meetings could coincide with the population year; at least you could have the meeting on the proposal in January. I think that before the technical group comes together to plan a proposal, one should have a very close look at all the political and psychological implications that this might have in the agencies and the member states.

HOPPER: I think these points are well taken, and I would hope, Mr. Chairman, that the sponsorship of any council that might emerge from this would be similar to the kind that we have for the agricultural group. That is a UN sponsorship. I would hope that the proposal would move along and would attract sponsors from the UNFPA, WHO, and other appropriate UN bodies that are fairly deeply involved in the population field. I would certainly have no objection whatsoever to a preliminary review of present international mechanisms that might serve or be adapted to this purpose, or any objection to cooperating with the appropriate UN bodies.

TABAH: We are preparing two documents that may be interesting for your next meeting in January. One of them I am preparing for the next so-called program committee which describes the mandates and the functions of the different agencies in terms of population. We are hoping that will be available before October.

ENGSTROM: I wanted to get some information if I could from the agricultural experience. The question to me is this: How does one join this organization? I can see that the UN agencies participate in some way as long as they stay as corporate agents and don't forget that they are answerable to 100 or more individual member states. But others of us have the privilege of being here in a national capacity, so to speak. What is the spread of

membership of the agricultural club, now that you have this mechanism?

McNAMARA: I think our objective here should be to join political institutions, the UN and the agencies that are part of the UN, with the freedom that is represented by the council and the two foundations; and this in essence is what has been done in the agricultural committee. That's exactly the objective. And therefore membership is by choice and is open almost to anyone who has interest and competency in the area. I should emphasize the agricultural council is quite different because one of its major objectives is fund raising, which, as Mr. Hopper pointed out, presumably would not be our objective here. But in the case of the agricultural consulting group, fund raising is a major objective, although there are participants who do not contribute to the funding of the agricultural institutes. I simply indicate this as illustrative of the freedom of any country to become a member. Dr. Engstrom is right. There is a bit of a problem here. I would just strongly urge that, particularly at this point, we not let that political problem deter us from moving to establish what Mr. Hopper had called a continuing evaluation and assessment. To me the most valuable part of this meeting has been the papers that have been prepared. If we'd never had a meeting at all, we'd have the papers; we would have accomplished a major part of the purpose, and it's to insure that we continue to have papers of this type that we need this consultative mechanism. That's the major purpose that we need to meet here. And I would urge that we proceed to have some of our associates do what Mr. Hopper has suggested: meet together within the next eight to 12 weeks and prepare a three- to four-page proposal that those institutions and nations who are interested could consider in December. If the two foundations would assume responsibility for calling from us technical experts to meet to prepare that proposal, I'd be delighted to cooperate.

BARNES: We're discussing a mechanism, and that's good, but I wanted to go back a step and, partly for the sake of the record, reiterate the purpose of the mechanism. What do we really want to accomplish by it? I would repeat Mr. McNamara's questions of yesterday: (1) What are the weaknesses in the agencies' programs? (2) Where should our energy and our resources be applied? (3) Who coordinates, who focuses, who guarantees effectiveness? And I think it's worth repeating those objectives, but I am not certain, given such a background assignment, that a UN mechanism or a political mechanism is the ideal way to achieve it. It is entirely possible that a free-standing, if you want to call it that, critical committee of experts should be the agency that aims at achieving these functions.

BELL: I take it that you're suggesting if a group of technical people come together to talk about this problem, they look not only at the Hopper suggestion but at alternative models such as the one you have just mentioned.

BARNES: The objective will shape the nature of the solution.

BELL: May I again, for the record, ask if my understanding of Mr. Hopper's proposal is correct. Is he proposing a free-standing committee?

HOPPER: Yes. I think it has to be.

BELL: Agreed. I think we must move outside of organized, politically dominated, established institutions toward a free-standing committee.

McNAMARA: As I see it, the mechanism is going to have to be a two-wing kind of activity: one is the free-standing technical committee that is indeed insulated from the international political agencies and the governments, although not insulated from the political realities of the need for population programs . . . and the knowledge of how you influence leaders. But I come back to the question posed at the end of the discussion: To whom does this group report? It's just not good enough to hold a Bellagio conference, at least not in my view, every two years with a core composition—but with some changing bases also—and to merely lay the reports on the table. I think that certainly from my agency's point of view, and I know from some of the other agencies, that they would like to receive these reports. There's no pressure on them to do other than come and listen to the assessments that appear; it's to whom this free-standing committee reports. I see the council therefore as being fluid: if the British wish to have a representative there, fine, if the French do, fine, if the Danes do, fine, if the Canadians do, fine; the foundations would be there, I assume, as would IPPF. It's those who are concerned with the population matter; and this becomes one source and only one of the sources of additional information and additional assessment. The council then, if we wanted, could ask the technical group to look at some specific problems; for example, the balance between basic and applied research. There are also the issues of private participation in the family planning programs, some of the questions about where we can begin to pool data, where we are going to get the census information from, the kind of question Mr. Tabah was raising as to how we get agencies to finance longitudinal studies of even relatively small samples, where the demographic data gaps are, and so on. Now I think all of these are things that this free-standing committee could be asked to take a look at by the council and then to report back to the council. The actions of individual agencies and governments on the council would in turn be monitored by the free-standing committee, and they could keep reminding us that there are gaps, so some of the donors who wish to support particular projects or who want to put in additional funding can find places to do it. And they could warn us when we begin to get perhaps too much money relative to the amounts that are going to other areas and bring us back to the balance.

MICHANEK: I speak very personally. Let me repeat what has been said before. The primary purpose, as I see it, of the group was given very clearly by Mr. McNamara yesterday when he talked about how to get action linked to thought. As I see it, that's the primary purpose. Now, it is obvious as we look around the table and see who can volunteer: the UN is one such agency, and Julia Henderson yesterday made a plea for the UN and pointed out that the existence of UNFPA and the Population Commission could make the work easier and probably other UN bodies could, too. I should like for the sake of discussion to say that I see reasons why the UN system cannot take on the task. We have tried, some of us personally, for 10 years to establish such a body as the one we are talking about. We discussed this first with the Population Council. That was before the UN had any action at all in this field. It was felt at that time that the council wouldn't take on this task. When new leadership came to the UN population division, we tried to get that leadership operational in this particular respect. We have not succeeded. I'm not going into the reasons. We tried another way: create a body within OECD. Some of us who sit here were financiers in that organization, and we have found it doesn't work as well as it should, probably not as well as it could. Some of us have put great hopes in the UNFPA, and it is trying hard to establish a leading role. I would hope it could. But why do I not believe in a UN central organization or an organization that is within the UN system? To put it shortly and probably too bluntly, I think the UN bodies are too official. They are too much afraid of government. They are not in a position to give a strong enough position to nongovernmental institutions. They are too much afraid of un-

pleasant truths and of free discussion. Because of my position and because of my hopes I have the strongest regard for the UN and want to strengthen it, but it isn't strong enough to take on this particular job, and we are now trying to find somebody who is. This is why I look forward to what has been called here a free-standing committee. To whom should it report? To its own members, members of the free choice.

HARKAVY: May I suggest that the preliminary technical group meet in Liège at the same time as the IUSSP conference in August to take advantage of the presence there of technical experts from the developing world who could participate in the development of a watching brief.

BERELSON: I speak in support of the free-standing committee and wish to make explicit what I consider to be involved. This is a free-standing committee to appraise the work of all of us, all of the agencies here—not simply the international system, but the supporting bilateral agencies and the private foundations themselves. Now the question may be in some minds that each of us in his own agency has systematic and continuous appraisals. I am being accused by my own staff of pulling up the plant about every three weeks in order to see whether the roots are growing! And each of us does that in his own organization, and we do that among ourselves here at Bellagio. What Mr. Hopper is proposing, as I understand it, is that that isn't good enough, and I agree with him. I think with a problem of this complexity and consequence, there are other views that need to be heard and from which we can learn in some systematic way—sober, objective views. We owe it to the effort itself to transcend ourselves in some such way, even though it may be painful at times. After all, each of us inevitably is characterized by the history of his own organization and his own biographical participation. If this afternoon we could get a very knowledgeable, informed, objective review of the entire enterprise from a free-standing committee and a sense of where we ought to go, would not each of us welcome that as a guide to his own individual activities? It's in that sense that I understand this proposal, and I welcome it.

HENDERSON: Just two questions for Mr. Hopper. First, is there implicit in Hopper 2 as in Hopper 1 the feeling that the OECD methodism, including the development center and its technical work, is no longer adequate to meet this purpose and that this would supplant, not simply add to, that mechanism? And, second, is there implicit also that a meeting of experts from all of the agencies concerned would recommend creating a new secretariat to do this watching brief?

HOPPER: The first, yes, it is implicit and indeed quite explicit.

HENDERSON: Therefore it would be replaced?

HOPPER: The OECD work in population in the development center at the present time has its own operating program. This might have been a valid mechanism, but although I have worked extensively with the development center at the OECD I just don't see, at the present time, getting it to the stage where it can be a free-standing mechanism of the kind we're talking about. As for your second question, yes, it'll have to have a secretariat, probably not a full-time one. I assume that the secretariat would not be an expensive item, as items go, and my immediate reaction is that the secretariat should be located in one of the UN agencies of the sponsoring bodies, or perhaps WHO, with some assistance to that organization and with assistance from some of the interested donors to provide enough money to operate the secretariat and enough to permit the free-standing technical committee to engage in its investigations.

PATIÑO: I still do not have this matter clearly in view. I believe I heard Mr. Hopper agreeing that the technical committee would meet within the UN mechanism, and now he's saying the secretariat would be attached in one way to a UN mechanism. To me this is a very fundamental question. I think a free-standing committee giving technical advice to a council, a voluntary council, is fine and I'm all for it. This is the perfect mechanism to obtain information and to take free decisions. But if we attach the mechanism at any level to a UN mechanism, we're limiting it and we are creating a different type of structure. I would be tremendously against such a move because I think that this would bring us back to the question of limiting and politically influencing the action of the mechanism.

BELL: We obviously have an extremely important point here that has been clearly identified by Dr. Patiño. I suggest we not discuss it further at this time because it's clearly something that will have to be addressed in both the technical committee and in any subsequent work. In a sense, Mr. Hopper is trying to have his cake and eat it too—which may indeed be the definition of how we want to come out in the end.

MARTIN: Thank you, Mr. Chairman. When I spoke earlier, I wasn't trying to oppose the idea at all. I was only seeking reassurance that if we didn't put any obstacles in the way, there wasn't going to be someone else who would come along and do it. And we can go over the points that are still worrying me. You are quite right, Mr. Hopper does seem to be wanting to have his cake and eat it, and I'm surprised that he is already so anxious to have the secretariat attached to an agency.

HOPPER: In a sense the agriculture case is able to have its cake and eat it.

MARTIN: Well, yes, this is something I'll find out more about when I get back to London. But I agree completely with Mr. McNamara. If someone says one step at a time, let's be pragmatic, by all means let's take the first two steps and see what happens. I'm all for having the technicians get together; they can probably identify areas and problems and questions, but I'm not sure they're the best people to advise on mechanism. We'd need to think about that. And one last remark about the IUSSP's meeting. I didn't quite catch what that was.

HARKAVY: The International Union for the Scientific Study of Population is having a major meeting the last week of August in Liège, and the reason for suggesting that as a rallying point for the first technical meeting is that people will be there from all over the world, and you could in some way get an *ad hoc* group that would involve key people from the developing world.

HOPPER: I think the other side to that, Mr. Chairman—I can see the advantages—is that you either exclude some people, and the gathering becomes suspect, or the organization that's holding the basic conference tries to color the rest as well.

RAVENHOLT: Reflecting upon the various, somewhat comparable, mechanisms, OECD, the UNFPA, these served very useful purposes for a time, and then for one reason or another they wandered off. The UNFPA indeed started well, with a sharp focus, and then the political aspects crept in somewhat. But it does seem to me that what we're speaking about is quite close to what that was—the Program Consultative Committee; and I suppose what we need is a Population Programs—plural—Consultative Committee that would have the participation and membership of anybody with a substantial interest in population programs, be they donor or recipient. We need a forum where they can come together. Just how much of it is a committee function and how much of it is a larger conference forum I'm not quite sure. Maybe we need both. But because there are so many meetings, it would be highly de-

sirable that as we create something new, we wipe out two or three conferences that are in being so that we reduce rather than increase the number of meetings we have to go to. I could see the meeting mechanism should be quite close to the UN, but, most importantly, any agency with a substantial interest in population programs should have a forum where they could come once a year, at least, to focus on related matters with people with similar interests.

MAIER: A point of clarification. I understood from something you said that you envisioned the Technical Assistance Committee consisting of experts from the donor agencies, and it's my impression that it would be much wider than that and that a wide variety of people could be commissioned on an *ad hoc* basis to do papers, although there would be a core group.

GILLE: I fully agree with Mr. McNamara's plea for a free-standing committee. What is really required is an opportunity for informal discussions between major donors and recipients and an impartial review of the performance of agencies, identification of the problems, and suggestions as to what we should do about them, in what direction we should go, and so forth. I am keeping in mind the views Mr. McNamara has expressed about the papers and the preparatory work that preceded the present meeting. A major reason why the papers have been useful and may have stimulated a frank discussion is because most of them have been individual papers—not agency papers. They would probably have looked quite different if they had been official agency papers; in the UN system at least, we have to be much more formal. As regards the establishment of the proposed committee, I am a little concerned about the many organizations and committees being established. I think we must consider the possible role of UNFPA and OECD in this regard before we proceed much further. There is a tendency for the same governments to establish one organization after the other and not to terminate or reconstitute them when the functions for which they were created are no longer needed. The Population Centre at OECD was established to carry, to a large extent, the review and coordination functions we are talking about; it did not work out satisfactorily and yet it continues—it is not being reconstituted or abandoned. The UNFPA has been given an important role to coordinate international population activities inside and now also outside the UN system. We should be careful in creating one organization after another without really trying to make effective use of them. But I grant Mr. Berelson's point that the role of the proposed committee would go beyond the function of the intergovernmental agencies, and therefore might be of much more use. Why not maintain but improve the series of Bellagio conferences, possibly by establishing a small secretariat to arrange for the preparation of papers and preparatory technical discussions? I do want to make clear, however, that if it is the general wish that the UNFPA should play a leadership role in arranging for the proposed new committee, we are certainly prepared to accept such a challenge. The paper that Mr. Tabah mentioned is under preparation, but is limited to a review of the mandates and the coordination problems in the UN system and does not take this broader view. We should keep the time factor in mind: I mentioned earlier that next year an important World Population Plan of Action will be submitted to the World Population Conference. We should avoid taking definite steps before the discussions at the World Population Conference and refrain from setting up an important, prestigious new body a few months before governments will no doubt consider these matters at the conference.

BELL: May I simply accept that point for later consideration, as with the point that Dr. Patiño made, and record our agreement that this is a major problem in thinking further about how we will proceed. The coincidence of timing with World Population Year creates problems, and it also may create opportunities that should be carefully considered.

KIEFFER: After hearing all this, it's a little hard to recollect where we are. I think I am concerned that the desire to have a free-standing committee may actually create something that isn't free moving. I think free moving at the moment is probably more important.

BELL: It's a distinction that's not immediately apparent to me. What do you mean?

KIEFFER: I'm worried that we're going to create a committee that's over in left field somewhere, unattached and bereft of influence and decision power, and I think I prefer this kind of body because of the multicharacter of its membership and the decision power of its members. I think we obviously have to relate more to the LDC's involvement, however.

BELL: This kind of body? You mean this table?

KIEFFER: Yes, but we should arrange things so we can't be considered as being dictatorial in population matters. I think what we need to add to this kind of body is a small secretariat that can see to the commissioning of papers on specific topics of agreed-upon interests, reaching for any kind of expertise that each matter requires. The committee would have these papers, status reports, and lists of things needing consideration and attention. The committee should have at least annual meetings, and I urge that they be very systematic. The secretariat would keep things moving and help us all focus our energies and resources.

HOGGART: The papers for this meeting, as good as they are, were, in my opinion, not complete reviews of the areas involved. I didn't feel enough elements were drawn on in most of them. I think we do need some form of fixed regular meeting; and more complex papers; and that therefore we need something a little more formal, more "formal" than this gathering. But I hope there will not be a separation into different, highly technical bodies. That way, we'll inhibit our actions rather than integrating them and keeping our eyes focused on what it is we are setting about.

TOWNLEY: Three points. Anything free-standing automatically excludes being housed within the United Nations. Secondly, the UN involvement in TAC-type operations leaves us a little uncomfortable, because in our vocabulary in the United Nations there are no such words as "donor" or "recipient." I know they're important words in other organizations, but in the UN we have always eschewed language of that kind. Thirdly, the present mechanism of the Bellagio conferences is extremely good: if it were systematized a little more along the lines of the present discussion, the United Nations would, I am sure, welcome the arrangements, and if invited, would participate in it at a very high level.

BELL: May I attempt to state my own sense of what we have reaffirmed this morning. The general consensus is that, while people have expressed various reservations, and none of us knows whether we can, in fact, move toward something more formal than our present group but not so formal as to run into the risks that Mr. Kieffer and Mr. Townley and others have properly reminded us of, we do see something glimmering in the distance, something that might be appropriate and helpful and valuable. It seems to me we have some consensus on the next steps that Mr. Hopper has suggested and which have been backed generally around this table. As an immediate procedural step, I suggest that we commission the Canadian International Development Research Centre and the Rockefeller and Ford foundations to organize a technical discussion, understanding the term "technical" to mean consideration of management and organization, not the substance of the popula-

tion programs. This group could meet perhaps at Liège, perhaps elsewhere, if possible before the early fall, and during the fall—if they reach agreement on a proposal—could circulate a specific proposal and an invitation to a meeting to consider the proposal. The meeting might well be, I would think, a one-day meeting to consider whether we should proceed to establish a free-standing committee reporting to a potential voluntary organization which might or might not have some hazy dotted-line relationship to the UN.

It seems to me that the various warnings expressed here this morning are well taken. It would be a mistake if this idea were seen as a proposal related to the world plan of action, and consequently it sounds to me a doubtful concept to associate it with another meeting aimed at that different target. However, I think we should leave that matter to Mr. Hopper and those in the two foundations who will be proceeding.

OKEDIJI: Let's assume that you found the free-standing technical committee and make other recommendations and these recommendations go to the council. What does the council do with it? You can use this to assess a program and so on and so forth. Then what next?

BELL: The only answer to that, Professor Okediji, is that something has happened as a result of these Bellagio meetings, by the voluntary decision of the participants and their agencies, as a result of information, ideas, and convictions that have been generated in a group like this. I assume that something similar is what is in our minds as we look ahead to this possible new arrangement.

May I, in closing, introduce John Rockefeller, who is the spiritual father of most of us in this meeting, and who has been sitting here with great patience listening to all of us.

ROCKEFELLER: Let me say a brief final word. The complexity of the problem we're all here to deal with has been brought out, and it's almost overwhelming in some ways. I remember a statement Dr. Toynbee made before the FAO in 1959, when he was analyzing the nature of the problem; he said this complexity was due to the fact that the population problem was based on "myriads of decisions by myriads of people" and that's what we have to try to influence.

To me the key to the problem is what's done in the countries where the problem exists. Do they want to face up to it? Do they want to take action that's meaningful? Others can help, but it's basically their problem, which we can back them up on.

I would like to feel that you leave this meeting with a sense of hope and confidence that there are exciting things happening, progress that's terribly encouraging, although one can point to many situations on the opposite side. In my own country, the population rate is apparently dropping to the ZPG level, which is really amazing. Obviously there's no way of telling whether it will continue or not. There is the decision of the Supreme Court on the abortion question—an amazing evolution in terms of our country. And I remember, at the end of the Johnson Administration, running into Dean Rusk at a meeting. He and I had been working together to try and encourage our government to adopt a formal population policy. He said that the reversal of thinking within the leadership in Washington was almost incredible—a complete change of approach. So in one country where the problem really hadn't been recognized as such until recently, terribly encouraging things are happening.

Although we don't have the full story on China, we've seen that things have happened there that should have importance not only in China but throughout our developing world. And I think it's tremendously significant that the wife of the president of the Philippines is devoting herself wholeheartedly to her country's facing up to this most important situation. I go away from this meeting with renewed confidence that the problem will be met—it's going to take time, it's going to take effort on the part of all of us. One of the reasons for my hope and confidence is this meeting, the very fact that you all are concerned and committed, too.

Let me mention one other thing. In our population commission, we recognized that the question of stabilization was basic, and at the end of the commission report we had a very interesting discussion. Should we mention stabilization at all? Should we recommend that the country move toward stabilization? The reason we debated that was because, more and more, as we discussed the issues that related to stabilization, we realized that it would be attained in our country by people being able to do things that they wanted to do anyway. To take just the question of unwanted children. In our country, 15 percent of children born are unwanted, not only unplanned but unwanted. If it were possible for people to eliminate unwanted children, obviously that would be a major step toward the attainment of the objective of stabilization. Now, in fact, we seem to have come close to stabilization, but it's not with any long-range assurance. Our objective is not pushing people or pressing for things that are governmentally significant or important in terms of other national policy or economic needs. They're important in terms of what people want and need, in terms of their personal lives and their long-range well-being and happiness. It's terribly important to me to remember that, because I believe what came to the fore in our country is true in other countries. We're working to meet the basic wants and needs of people generally.

I hope you'll go out feeling this meeting was useful, feeling a hopefulness, a confidence that in the long range, with efforts such as ours, results will be attained. While I'm no longer chairman of our foundation as I was at the first two meetings, I was made honorary chairman, and would like to repeat what John Knowles said: thank you for coming, and thank you, more importantly, for your interest and concern and commitment to this most important subject.